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ABSTRACT

This is the final report of a study that examined paraprofessional influence on student achievement and attitudes and on paraprofessional performance outside the classroom. The paraprofessionals studied were those employed in the New York City public schools and supported by district decentralized ESEA Title I and New York Urban Education Quality Incentive Program Funds. Close to four-fifths of these paraprofessionals serve as classroom paraprofessionals. Previous evaluation studies left unanswered the question of what connection, if any, exists between measured student achievement in cognitive and affective areas and the presence or absence of paraprofessional services. Pre-test and post-test pupil achievement results and post-test scores from two attitude inventories served as the study's dependent variables. The 63 experimental classrooms and 35 control classrooms selected at random for the study included 2,821 third grade students. Nonclassroom paraprofessionals, such as family assistants and family workers, perform as paraprofessional social workers. Because this part of the study began so late in the school year, it was agreed that the investigation would be limited to an examination of their background and the work they perform as paraprofessionals, rather than attempting to discover the effect they are having. (Author/JM)

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PARAPROFESSIONAL INFLUENCE ON STUDENT ACHIEVEMENT AND ATTITUDES

&

PARAPROFESSIONAL PERFORMANCE OUTSIDE THE CLASSROOM

in District Decentralized ESEA Title I and New York State Urban Education Projects in the New York City Schools

A Study for the Board of Education of the City of New York

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An evaluation of a New York City school district educational project funded under Title I of the Elementary and Secondary Education Act of 1965 (PL89-10), performed under contract with the Board of Education of the City of New York for the 1970-1971 school year.

An evaluation of a New York City school district educational project funded by the New York State Urban Education Program enacted at the 1970 Legislative Session of the New York State Legislature for the purpose of "meeting special educational needs associated with poverty." (Education Law 3602, subdivision 11 as amended.)

INSTITUTE FOR EDUCATIONAL DEVELOPMENT
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New York, New York 10017

September 1971

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One year ago we completed an In-Depth Study of the paraprofessional program in the schools of New York City, and based on who had been hired and what jobs they did, we labelled it an overwhelming success.

Now we have the solid evidence of improved pupil achievement to underpin that conclusion.

H. M. B. and C. B. A.

PREFACE

One of the standard and perhaps sometimes deserved complaints concerning evaluative studies in education is that they tend to reach foregone conclusions. Sometimes evaluators are charged, moreover, with making sure that they please or at least avoid offense to client educators. Hence, it is said that in evaluation reports one may as well expect favorable findings, hollow approvals, and bland criticism.

The moment of publication of the present study may be as timely as any for a statement concerning the ethical climate provided for research contractors by the New York City Board of Education. At hand is an example of the experience of one such contractor, for whatever it may be worth.

The educators at 110 Livingston Street who authorized this study took substantial risks, as even a cursory look at this report will reveal. They had no way of knowing in advance or even of making shrewd guesses as to the results of the inquiry. They did not have to take the step that put this research into motion. There was no publicity attending the decision, and it was made routinely. There were no motives for the action that I can imagine other than a concern to know more about the effectiveness of one of the most popular programs introduced in New York's schools in modern times.

The risks taken by the New York City educators lay in the chance that their exceedingly popular program might be found wanting in results, or even perhaps counterproductive, and thus discredited, through evidence amassed in evaluation.

The background for their decision deserves brief explanation.

Since its origin in 1967, the object of this study, the paraprofessional program in New York City's schools, has come to employ more than 14,000 persons at an annual cost in excess of $60 million. Probably over 200,000 Americans now work in public schools as paraprofessionals and nearly all of them have been hired for that work within the last four years. By any accounting, this movement adds one of the most important dimensions to urban education in recent decades.

Two years ago the New York City schools commissioned our Institute to make the first large survey of paraprofessional experience to that date. At the conclusion Dr. Brickell and his colleagues reported that they had found overwhelming evidence of the success of the program, at least within the limits of their study, which was aimed primarily at describing the people who worked as paraprofessionals and the kinds of activities they engaged in. Yet several vital questions had remained outside the scope of the first study. One of them queried the very worthwhileness of a large segment of the paraprofessional program: What happens to the achievement of children when a paraprofessional is in the classroom? That was the hard-boiled, high-risk question around which the present study was organized, and then, of course, many questions -- literally hundreds -- followed.

The framers of the questions were never asked not to ask anything, and they knew how little _anybody_ could know about the answers they would get. They were let alone. They were keenly aware of the difficulties in proving that any factor or discrete combination of causes produces more learning in a classroom. I wish that the reader could have shared the suspense as the day approached, only three weeks ago, when the first "cut" of the data would come in from the computer subcontractor. The report tells the rest of the story.

Our testimony, therefore, is that the present study was conducted under highly favorable conditions for social science, or any other kind of research, and, to my knowledge, the same conditions prevailed for our other undertakings on behalf of the New York City Board of Education. One could wish for prompter payment and more convenient scheduling, and perhaps other amenities at the hands of that agency, yet we are glad to express appreciation for the integrity and courage which provide independent, external evaluation of taxpayer programs.

Donald E. Barnes
Acting President
Institute for Educational Development

August 31, 1971

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EXECUTIVE SUMMARY

This is the final report of a study that examined paraprofessional influence on student achievement and attitudes and on paraprofessional performance outside the classroom. The study was conducted in the 1970-71 school year under an agreement with the Bureau of Educational Research, Board of Education of the City of New York. The work to examine paraprofessional influence on student achievement and attitudes was authorized by the Bureau in October, 1970, and was performed between October, 1970, and August, 1971, by the staff of the Institute for Educational Development (IED). The work to assess paraprofessional performance outside the classroom was authorized in February, 1971, and was performed between February and August, 1971, by IED. The paraprofessionals studied were those employed in the New York City public schools and supported by district decentralized ESEA Title I and New York State Urban Education Quality Incentive Program funds.

This summary is divided into two parts to represent major subdivisions of the total study. Book I examines the influence of classroom paraprofessionals on student achievement and attitudes. Book II describes the performance of paraprofessionals outside the classroom.

BOOK I

Paraprofessional Influence on Student Achievement and Attitudes

In 1969-70, IED prepared for the Bureau of Educational Research An In-Depth Study of Paraprofessionals in District Decentralized ESEA Title I and New York State Urban Education Projects in the New York State Urban Education Projects in the New York City Schools. The In-Depth Study developed an elaborate profile of paraprofessionals, giving information on age, sex, ethnic background, education, level of income, and other characteristics thought to be significant. It surveyed the nature of paraprofessional work and determined what specific activities paraprofessionals carry out, in what kinds of schools, in what physical locations, and on what time schedule. It asked five target populations--paraprofessionals themselves, pupils, teachers, school principals, and parents--to describe the impact paraprofessionals were having on them. But that investigation, elaborate though it was, did not complete the analysis required.

Many significant questions were left unanswered by the 1969-70 study. Most important of these was: What is the connection, if any, between measured student achievement in cognitive and affective areas and the presence or absence of paraprofessional services?

Evaluation Objectives

To answer this question, IED developed the following evaluation objectives for the current study:

1. To assess the effect of paraprofessional services on pupil cognitive and affective achievement;
2. To determine in substantial detail whether certain paraprofessional *activities* (as well as certain teacher *activities*) are associated with higher pupil achievement;
3. To determine whether the *training* received by paraprofessionals is associated with their effectiveness;
4. To determine whether the personal *characteristics* of paraprofessionals are associated with their effectiveness.

Evaluation Design

The general design of the study called for the use of an experimental group of third grade classrooms *with* paraprofessionals and a comparable group of third grade classrooms *without* paraprofessionals. In total, 63 experimental classrooms and 35 control classrooms were selected for the study. Altogether, 37 schools in four boroughs were represented.

The 2,821 third grade students in the study were pre-tested and post-tested in reading and arithmetic with instruments normally used by the city and post-tested with two instruments designed to measure attitude toward self, attitude toward school, and attitudes toward specific school subjects (including reading and arithmetic). In addition, each classroom was visited monthly to gather observation data during reading and arithmetic periods; a total of five reading observations and two arithmetic observations were planned. A variety of observation instruments was used, including the Amidon Modified Category System to gather information on teacher-pupil and paraprofessional-pupil interactions during the lesson, a Media Checklist to record the types of media used, and a Reading and Arithmetic Textbook Behaviors Checklist, which collected data on teaching techniques used by teachers and paraprofessionals.

In addition, data on the personal characteristics, usual daily activities, and training history of each paraprofessional were collected. Information was also gathered on the age, experience, education, and attitudes toward paraprofessionals of the teachers, and on the sex, ethnic background, and attendance records of the students.

The pre-test and post-test pupil achievement results and the post-test scores from the two attitude inventories served as the dependent variables of the study. These and the numerous measures of independent variables, such as the classroom observations and data on paraprofessional, teacher, and student backgrounds, were compared to identify significant relationships.

1. Does the use of paraprofessionals have an effect on pupil achievement gain and on pupil attitudes toward themselves and toward school?
2. What characteristics of pupils, paraprofessionals, or teachers are associated with pupil achievement gains?
3. Is anything in the content and methods of training paraprofessionals associated with pupil achievement gains?
4. What specific paraprofessional and teacher behaviors are associated with achievement gains?
5. What characteristics of classroom organization, time devoted to reading and arithmetic, and the use of media are associated with pupil achievement gains?

Findings

The findings are presented below as the answers to 11 questions.

1. Does the use of paraprofessionals in 3rd grade classes improve reading?

Yes. The improvement is definite and substantial. Students in classes with paraprofessionals improve more than students in classes without paraprofessionals. Significantly, the students who improve most are those who are left with the teacher when a paraprofessional takes a group aside during the reading lesson. But even those who get direct help from the paraprofessional improve more than students in classes without paraprofessionals. Black children who have paraprofessionals in their classes improve somewhat more than other children in such classes. Moreover, those Black children who get direct help from paraprofessionals improve substantially more than other children who get such direct help.

2. Does the use of paraprofessionals in 3rd grade classes improve arithmetic achievement?

Yes. The improvement is clear, straightforward, and significant. Students in classes with paraprofessionals improve more than students in classes without paraprofessionals. Significantly, the students who improve most are those taken aside and given direct help by the paraprofessional. However, even those who stay with the teacher during the arithmetic lesson improve more than students in classes without paraprofessionals. In short, being in a class with a paraprofessional, whether or not the student is given direct help, is better than being in a class without a paraprofessional.

3. Does the use of paraprofessionals in 3rd grade classes have an effect on student attitudes?

The answer is uncertain. When student attitudes toward themselves, toward school, and toward specific school subjects were measured at the end of the year, there was very little difference among students in classes with paraprofessionals, students who were given direct help by paraprofessionals, and students in classes without paraprofessionals. Although some of the differences were "statistically significant," they were too small to have much educational or practical significance. For example, most differences could have been caused by an average change of one answer on the attitude questionnaires.

Among the findings were these: Children in classes without paraprofessionals have more self-esteem than children in classes with paraprofessionals, although their attitudes toward school do not differ. Again, children in classes without paraprofessionals express a stronger interest in science, while those in classes with paraprofessionals express a stronger interest in arithmetic and in language, two areas in which paraprofessionals work. However, the differences are so small as to be of negligible educational importance.

4. Are student attitudes in 3rd grade classes related to improvement in reading and arithmetic?

Yes. In reading, children with favorable attitudes toward school improve more in reading than children with unfavorable attitudes. In arithmetic, students with the poorest attitudes toward school (and toward science) make the greatest improvement. This pattern in arithmetic is even clearer and stronger for Black children. That is, Black children with poor attitudes toward school (and toward science) improve more in arithmetic than Black children who have good attitudes.

5. What kinds of students in 3rd grade classes improve most in reading and arithmetic?

Few characteristics matter. Boys improve in reading and arithmetic as much as girls. Pupils who are absent frequently improve as much as those who attend regularly. In fact, the effect of paraprofessionals is the same for boys as for girls and is the same for pupils who are often absent as for pupils who are usually present.

There are some differences. *In reading*, Black children in classes *without* paraprofessionals do not improve as much as other children, but in classes *with* paraprofessionals, *Black children improve more than other children*.

In arithmetic, Black pupils do not improve as much as other pupils *except when they are given direct help by paraprofessionals*.

Each pupil was rated by his teacher as high, medium, or low in potential for doing well in school. *In reading*, pupils rated high by their teachers improve most, those rated low do not improve as much, and those rated medium improve the least of all. *In arithmetic*, the pattern is different: Students rated low improve most, students rated medium do not improve as much, and students rated high improve least of all.

6. What kinds of paraprofessionals are associated with the greatest student improvement in reading and arithmetic?

No characteristics matter. All kinds of paraprofessionals seem to be quite similar in their effect on all kinds of students in both reading and arithmetic. It does not matter whether paraprofessionals are young or old, Black, White, or Puerto Rican, whether they have several children or no children at all, whether their incomes are low or moderate (high-income persons are rarely employed as paraprofessionals), whether they have one or more dependents, whether they work 20 or 30 hours a week, how much experience they have had, whether or not they have had formal training, or how long they have lived in their present neighborhoods. None of these characteristics are related to whether pupils improve in reading or arithmetic.

7. What kinds of teachers are associated with the greatest student improvement in reading and arithmetic?

Teacher characteristics do not matter. All kinds of teachers have about the same effect on all kinds of students both in reading and in arithmetic. It does not matter whether teachers are young or old, have baccalaureate or graduate degrees, are beginners or veterans, are just beginning in an urban school system or have taught in one for years, have never taught in Grades 1, 2, 4, 5, or 6, consider their paraprofessionals excellent or only fair, or want a paraprofessional assigned to them for next year. None of these characteristics are related to whether pupils improve in reading or in arithmetic. Of all the characteristics studied, only one showed up as significant: the fewer the number of years a has spent teaching third grade, the better.

8. Does the training of paraprofessionals for 3rd grade classes improve reading, arithmetic, or student attitudes?

Apparently not. Of 137 questions asked of paraprofessionals about when they were trained, how they were trained, and what they were taught, not one of the 137 showed up as being related to student achievement in reading or in arithmetic or to student attitudes toward themselves, toward school, or toward specific school subjects such as reading and arithmetic.

It does not matter whether paraprofessionals have been instructed by auxiliary trainers or district trainers, whether their training has taken place inside or outside the school, during school hours or after school hours, weekly or monthly. It does not matter if the sessions lasted less than an hour or an entire day, and it does not matter whether the classroom teacher was present in addition to the paraprofessional. Lectures are as effective as demonstrations or individual conferences. The use of films, video tapes, and field trips makes no difference. It does not matter what paraprofessionals were taught in any one of 19 different training areas. That is, it makes no difference whether they were taught ethical considerations on the job, career opportunities for themselves, the content of the school curriculum, teaching methods, disciplinary procedures, or techniques for linking school and community.

9. What specific teacher behaviors in 3rd grade classes improve reading and arithmetic?

In reading, some teacher behaviors are better than others. It is better for teachers to acknowledge and recognize the ideas students express during reading lessons, better for them to help students clarify and sharpen those ideas, and better for them to summarize and consolidate student ideas. In short, it is clearly better for teachers to accept student ideas and to work them into the lesson than it is to ignore those ideas.

As to the specific techniques for teaching reading recommended by the teachers' manuals accompanying the basic reading and arithmetic textbooks widely used in the New York City schools, some are better than others. It is better for teachers to have children read silently rather than to have them read aloud or to read aloud to them, better for them to have pupils help one another, better to demand student answers containing conclusions or judgments rather than repeating facts, and better for them to help pupils figure out the meaning of new words for themselves.

In arithmetic, some teacher behaviors are also better than others. It is better for teachers to give orientation lectures explaining what the children will be learning and how it grows out of what they learned before. It is also better for teachers to give a clear reason for any criticism they make of student answers and ideas, and, conversely, it is undesirable for teachers to criticize student answers and ideas without giving a clear reason for the criticism. Students who receive individual help do not improve as much, but presumably this means only that teachers find it necessary to give individual help to low-performing students rather than that individual help is undesirable.

10. What specific paraprofessional behaviors in 3rd grade classes improve reading and arithmetic?

In reading, some paraprofessional behaviors are better than others. It is better for paraprofessionals to hold down the number of factual lectures they give to children, to hold down the amount of time they spend talking to small groups of children, and to build up the amount of time they spend working with individual children.

In arithmetic, some paraprofessional behaviors are also better than others. It is better for paraprofessionals to limit the number of motivational lectures or "pep talks" they give during arithmetic lessons, better for them to give more orientation lectures in which they explain to the children what they will be learning, and how it is connected to what they learned before, and better for them to let the students initiate talk rather than letting them speak only when the paraprofessional asks them a question.

It does not matter whether paraprofessionals teach reading or arithmetic as suggested by the teachers' manuals. In reading, for example, it does not seem to matter whether the paraprofessional has the children read orally or silently, whether she tells the meaning of the words or has the children figure them out for themselves, or whether the children help one another. Similarly, in arithmetic it does not seem to matter whether the paraprofessional uses tangible objects such as pegs, rods, and abacuses, whether she explains new arithmetic terms before or after the children grasp the ideas they represent, or whether she incorporates historical information about arithmetic into the lesson.

11. Does the use of media in 3rd grade classes improve reading and arithmetic?

Yes. The frequent use of a variety of media helps students improve both in reading and in arithmetic. On the other hand, it does not matter which particular medium is used. Of the 71 different kinds of media examined, no single one made a difference in pupil improvement in reading or in arithmetic. What does make a difference is the frequent use of several different types of media.

BOOK II

Paraprofessional Performance Outside the Classroom

IED did not evaluate non-classroom paraprofessionals directly in terms of pupil achievement. In part, these paraprofessionals, such as family assistants and family workers, perform as paraprofessional social workers, as IED learned during the 1969-70 In-Depth Study. They assist families in solving school, health, employment, housing, finance, and police and legal problems. They seem to perform a valuable service, and their work is widely appreciated. However, helping families (including pre-school children and older persons not in school) cannot reasonably be expected to have any immediate effect on pupil achievement.

Non-classroom paraprofessionals were added to the study in February, 1971, at the request of New York State Education Department officials. Because this part of the study began so late in the academic year, it was agreed that IED would confine its investigation of non-classroom paraprofessionals to an examination of their background and the work they perform as paraprofessionals, rather than attempting to discover the effect they are having.

Evaluation Objectives

In describing the background and work of non-classroom paraprofessionals, IED set the following goals:

1. To determine the background characteristics of the paraprofessionals;

2. To ascertain the daily activities of the paraprofessionals;

3. To find out from supervisors whether the paraprofessionals are in fact performing the activities they report;

4. To compare the daily activities of the paraprofessionals with what project directors say their daily activities are intended to be;

5. To compare the daily activities of the paraprofessionals with what trainers describe as the activities for which training was provided.

Evaluation Design

Information was gathered from the project directors of the 43 district decentralized ESEA Title I and New York State Urban Education projects that focused on the use of both classroom and non-classroom paraprofessionals. This information revealed that approximately 325 of all such paraprofessionals worked in non-classroom roles. Included in IED's sample of non-classroom paraprofessionals were both the direct parent/community paraprofessional, such as family assistants and parent program assistants, and paraprofessionals who worked in the school building but not in the classroom, such as library aides and guidance aides. A total of 169 paraprofessionals were selected for the study.

The general design of the study of non-classroom paraprofessionals involved an analysis of their background characteristics related to their daily duties and a comparison of daily duties as reported by the paraprofessional herself, as reported by her supervisor, as intended or expected by the project director, and as trained for by the district trainer.

Background and job information on the paraprofessionals was examined for the total population of responding paraprofessionals and for each job title. The job activities checklist completed by each paraprofessional was compared with the identical checklist completed by her own supervisor to determine the extent of matching between what the paraprofessional reports she does and what her superior reports about her. This is a verification procedure to determine whether paraprofessionals are performing as they claim. Likewise, the project directors' selections of job activities were compared with those chosen by the paraprofessionals to assess whether the project directors' expectations matched paraprofessional performance. Finally, the job activities selected by trainers were compared with those chosen by paraprofessionals to indicate exactly what behaviors the paraprofessionals have been taught to perform and what the paraprofessionals are actually doing. IED considers these comparisons to be an evaluation of the success of the use of non-classroom paraprofessionals.

Findings

What are non-classroom paraprofessionals like? Answers to this question came from interviews with a sample of 146 paraprofessionals out of the 325 employed in the Group H of the ESEA Title I and Group 8 of the New York State Urban Education programs. These non-classroom paraprofessionals were employed in 31 separate projects in 13 of the 31 separate decentralized school districts into which New York City is subdivided.

The composite picture of the typical paraprofessional was derived from the most frequent responses to background information items in the questionnaire.

The Typical Non-Classroom Paraprofessional. The typical non-classroom paraprofessional in the New York City schools is a 37 year old Black woman who was born in the South, was raised in a large city, and has lived in New York City for more than 15 years. Her husband is the head of the household; their family includes three children who live at home, two in elementary school and one in high school.

The family is dependent upon an income of $8,000 a year of which her wages as a paraprofessional constitute a substantial portion but less than half. She has no job other than her job as a paraprofessional. She has a high school diploma but neither attended college nor ever participated in a professional or vocational training program.

The typical paraprofessional belongs to only one organization, a school-connected group. On the other hand, she maintains active informal communication with the parents and children with whom she works--even outside her job--a relatively easy feat, since she lives within three blocks of most of them.

She works most often with Blacks and next most often with Puerto Ricans.

The typical worker is in her third year as a paraprofessional and serves as a family assistant. She works 26 to 30 hours a week in an elementary school in the school district in which she lives. Her work occupies her only during school hours. She works only in the school building but moves from offices to classrooms to other locations. She works most often with Blacks and next most often with Puerto Ricans. Ordinarily she does not teach students; when she does work with students directly, her work is concentrated in Grade 2. She knows no foreign languages. The school principal supervises her work continuously.

The Relation of Paraprofessional Characteristics and Work to Title of Position. There are almost no noticeable differences in the background characteristics of the people filling the seven different non-classroom paraprofessional positions studied: family assistants, educational assistants (library aides), parent program assistants, school aides, family workers, auxiliary trainers, and teacher aides.

It is only when paraprofessional jobs are broken down into very small, discrete tasks at the level of detail used in IED's 207-item job descriptions questionnaire (Section B of the two-part background information and job descriptions instrument appearing in Appendix G, p. A-189) that distinctions between various paraprofessional jobs finally appear. At the level of detail reached in that questionnaire, the jobs do separate and take on a distinctive character.

A study of the items shows that some jobs appear to be particularly straightforward in conception and uncluttered in execution. The relatively "pure" jobs appear to be these: auxiliary trainer, educational assistant (library aide in this case), and school aide. The jobs which have the incumbents performing a mixed assortment of tasks appear to be these: parent program assistant, family assistant, family worker, and teacher aide. The mixture of tasks within each of these jobs would presumably create some difficulties in building a training program for the persons holding them and would simultaneously make it difficult for supervisors to establish job performance expectations.

Comparison of Views About Paraprofessional Performance Among Project Directors, Immediate Supervisors, Trainers, and Paraprofessionals Themselves. Project directors were asked what they expected paraprofessionals to do; immediate supervisors were asked what paraprofessionals were actually doing; trainers were asked what they had been training paraprofessionals to do. Through an elaborate computer analysis, IED constructed similarity measures (based on the exact hypergeometric distribution) to determine the degree of agreement between project directors and paraprofessionals, supervisors and paraprofessionals, project directors and supervisors, project directors and trainers, and supervisors and trainers. The analysis of all six pairs of observations across all seven job titles revealed a remarkably high degree of agreement.

What can be said in general about the remarkably high degree of agreement reached among those who train paraprofessionals, supervise their work, and conceive their jobs is at least this: What paraprofessionals say they do is what those in charge of their work believe they should do and (in the case of their immediate supervisors) confirm that they actually do. This finding supplies an important underpinning to the more elaborate data in IED's 1969-70 In-Depth Study which was drawn entirely from paraprofessionals. The tasks that paraprofessionals reported doing seemed generally sensible last year but there was no way to be certain that they were actually carrying out such tasks. This year's data supply the necessary confirmation.

CHAPTER 1

INTRODUCTION

This is the final report of a study that examined paraprofessional influence on student achievement and attitudes and on paraprofessional performance outside the classroom. The study was conducted in the 1970-71 school year under an agreement with the Bureau of Educational Research, Board of Education of the City of New York. The work to examine paraprofessional influence on student achievement and attitudes was authorized by the Bureau in October, 1970, and was performed between October, 1970, and August, 1971, by the staff of the Institute for Educational Development (IED). The work to assess paraprofessional performance outside the classroom was authorized in February, 1971, and was performed between February and August, 1971, by IED.

The paraprofessionals studied were those employed in the New York City public schools and supported by district decentralized ESEA Title I and New York State Urban Education Quality Incentive Program funds. District decentralized projects are those planned and carried out by the 33 individual school districts in the New York City school system, each district being administered by a district superintendent and a supporting staff. The staff includes at least one district ESEA Title I and New York State Urban Education Program coordinator, who coordinates all the district projects within these programs and who may also act as project director for several or all projects.

This report is divided into two parts to represent major subdivisions of the total study. Book I examines the influence of classroom paraprofessionals on student achievement and attitudes. Book II describes the performance of paraprofessionals outside the classroom.

BOOK I

Paraprofessional Influence on Student Achievement and Attitudes

According to IED's 1969-70 study for the Bureau of Educational Research, An In-Depth Study of Paraprofessionals in District Decentralized ESEA Title I and New York State Urban Education Projects in the New York City Schools (hereafter referred to in this report as the In-Depth Study), close to four-fifths of the paraprofessionals in the New York City schools serve as classroom paraprofessionals. (Major findings of the In-Depth Study are discussed in Chapter 2, "Background Information.") These paraprofessionals work primarily in the classroom under the supervision of a licensed teacher and assist in small-group instruction.

Many significant questions were left unanswered by the 1969-70 study. Most important of these was: What is the connection, if any, between measured student achievement in cognitive and affective areas and the presence or absence of paraprofessional services?

Evaluation Objectives

To answer this question, IED developed the following evaluation objectives for the current study:

1. To assess the effect of paraprofessional services on pupil cognitive and affective achievement;
2. To determine in substantial detail whether certain paraprofessional activities (as well as certain teacher activities) are associated with higher pupil achievement;
3. To determine whether the training received by paraprofessionals is associated with their effectiveness;
4. To determine whether the personal characteristics of paraprofessionals are associated with their effectiveness.

Evaluation Design

The general design of the study called for the use of an experimental group of third grade classrooms with paraprofessionals and a comparable group of third grade classrooms without paraprofessionals. In total, 63 experimental classrooms and 35 control classrooms were selected at random for the study. Altogether, 37 schools in four boroughs were represented.

The 2,821 third grade students in the study were pre-tested and post-tested in reading and arithmetic with instruments normally used by the City and post-tested with two instruments designed to measure attitude toward self, attitude toward school, and attitudes toward specific school subjects (including reading and arithmetic). In addition, each classroom was visited monthly to gather observation data during reading and arithmetic periods; a total of five reading observations and two arithmetic observations were planned. A variety of observation instruments were used, including the Amidon Modified Category System to gather information on teacher-pupil and paraprofessional-pupil interactions during the lesson, a Media Checklist to record the types of media used, and a Reading and Arithmetic Textbook Behaviors Checklist, which collected data on teaching techniques used by teachers and paraprofessionals. In addition, data on the personal characteristics, usual daily activities, and training history of each paraprofessional were collected. Information was also gathered on the age, experience, education, and attitudes toward paraprofessionals of the teachers, and on the sex, ethnic background, and attendance records of the students.

The pre-test and post-test pupil achievement results and the post-test scores from the two attitude inventories served as the dependent variables of the study. These and the numerous measures of independent variables, such as the classroom observations and data on paraprofessional, teacher and student backgrounds, were compared to identify significant relationships.

1. Does the use of paraprofessionals have an effect on pupil achievement gain and on pupil attitudes toward themselves and towards school?

2. What characteristics of pupils, paraprofessionals, and teachers are associated with pupil achievement gains?

3. Is anything in the content and methods of training paraprofessionals associated with pupil achievement gains?

4. What specific paraprofessional and teacher behaviors are associated with achievement gains?

5. What characteristics of classroom organization, time devoted to reading and arithmetic, and the use of media are associated with pupil achievement gains?

A detailed description of how the sample classrooms were selected appears in Chapter 3, "Sample Selection." The development and selection of data collection instruments is described in Chapter 4, "Instrument Selection and Development," and data analysis procedures are presented in Appendix D, p. A-87. A complete account of the answers to the questions above and their implications can be found in Chapter 6, "Findings."

BOOK II

Paraprofessional Performance Outside the Classroom

IED did not evaluate non-classroom paraprofessionals directly in terms of pupil achievement. In part, these paraprofessionals, such as family assistants and family workers, perform as paraprofessional social workers, as IED learned during the 1969-70 In-Depth Study. They assist families in solving school, health, employment, housing, finance, and police and legal problems. They seem to perform a valuable service, and their work is widely appreciated. However, helping families (including pre-school children and older persons not in school) cannot reasonably be expected to have any immediate effect on pupil achievement.

Non-classroom paraprofessionals were added to the study in February, 1971, at the request of New York State Education Department officials. Because this part of the study began so late in the academic year, it was agreed that IED would confine its investigation of non-classroom paraprofessionals to an examination of their background and the work they perform as paraprofessionals, rather than attempting to discover the effect they are having.

Evaluation Objectives

In describing the background and work of non-classroom paraprofessionals, IED set the following objectives:

1. To determine the background characteristics of the paraprofessionals;
2. To ascertain the daily activities of the paraprofessionals;
3. To find out from supervisors whether the paraprofessionals are in fact performing the activities they report;
4. To compare the daily activities of the paraprofessionals with what project directors say their daily activities are intended to be;
5. To compare the daily activities of the paraprofessionals with what trainers describe as the activities for which training was provided.

Evaluation Design

Information was gathered from the project directors of the 43 district decentralized ESEA Title I and New York State Urban Education projects that focused on the use of both classroom and non-classroom paraprofessionals. This information revealed that approximately 325 of all such paraprofessionals worked in non-classroom roles. Included in IED's sample of non-classroom paraprofessionals were both the direct parent/community paraprofessional, such as family assistants and parent program assistants, and paraprofessionals who worked in the school building but not in the classroom, such as library aides and guidance aides. A total of 169 paraprofessionals were selected for the study.

The general design of the study of non-classroom paraprofessionals involved an analysis of their background characteristics related to their daily duties and a comparison of daily duties as reported by the paraprofessional herself, as reported by her supervisor, as intended or expected by the project director, and as trained for by the district trainer.

Specifically, IED:

1. Administered to the sample of non-classroom paraprofessionals a revised and expanded version of two instruments used in the 1969-70 In-Depth Study: "Background Information on Paraprofessionals" and "Job Descriptions for Paraprofessionals;"

2. Administered to the immediate supervisors of each non-classroom paraprofessional in the study the checklist of 207 job activities contained in the paraprofessional's questionnaire (each supervisor was asked to describe the actual daily duties of the paraprofessional supervised);

3. Administered to the directors of projects in which each non-classroom paraprofessional in the study worked the checklist of 207 job activities (each director was to describe the daily duties expected of the paraprofessionals employed in the project);

4. Administered to the district trainers of non-classroom paraprofessionals in the study the checklist of 207 job activities (each trainer was asked to describe the duties for which these paraprofessionals were trained).

Background and job information on the paraprofessionals were examined for the total population of responding paraprofessionals and for each job title. The job activities checklist completed by each paraprofessional was compared with the identical checklist completed by her own supervisor to determine the extent of matching between what the paraprofessional reports she does and what her superior reports about her. This is a verification procedure to determine whether paraprofessionals are performing as they claim. Likewise, the project directors' selections of job activities were compared with those chosen by the paraprofessionals to assess whether the project directors' expectations matched paraprofessional performance. Finally, the job activities selected by trainers were compared with those chosen by paraprofessionals to indicate exactly what behaviors the paraprofessionals have been taught to perform and what the paraprofessionals are actually doing. IED considers these comparisons to be an evaluation of the success of the use of non-classroom paraprofessionals.

A detailed description of the sample selection of non-classroom paraprofessionals can be found in Chapter 9, "Sample Selection." The data collection instruments are presented in Chapter 10, "Instrument Selection and Development," and data analysis procedures are explained in Appendix H, A-208. A complete account of conclusions is found in Chapter 12, "Findings and Implications."

BOOK I

PARAPROFESSIONAL INFLUENCE ON STUDENT ACHIEVEMENT AND ATTITUDES

CHAPTER 2

BACKGROUND INFORMATION

According to the 1969-70 In-Depth Study, two classifications of auxiliary personnel are employed in the New York City schools: classroom paraprofessionals, who perform as sub-professional teachers and share instructional duties, and parent/community paraprofessionals, who work with families as sub-professional social workers. Classroom paraprofessionals constitute by far the greater part of those employed. The 1969-70 study indicated that approximately 80 percent of all paraprofessionals employed in New York City were classroom paraprofessionals. Most of these were employed with the title educational assistant.

The services of classroom paraprofessionals are concentrated in Grades 1, 2, and 4, with most paraprofessionals used in Grade 3. The typical paraprofessional, as revealed by the 1969-70 study, is in her first or second year of employment as an educational assistant. She spends most of her time in the classroom, assisting a third grade teacher. She works with small groups and with individual students, teaching and tutoring them primarily in reading and, to a lesser extent, in arithmetic. Judging from the ten most commonly checked items on a checklist of 175 paraprofessional activities administered as part of the 1969-70 study, the paraprofessional works alongside the teacher and shares her job rather than performing supportive functions for the teacher. This being the case the classroom paraprofessional may very well be expected to have a direct impact on pupil learning, particularly in reading and arithmetic, where most of her efforts are concentrated.

All the source documents examined by IED -- professional literature, ESEA Title I and New York State Urban Education guidelines, and specific proposals for projects in the New York City schools -- place the greatest stress on pupil achievement in both cognitive and affective areas as the ultimate objective of the paraprofessional program. Whatever benefits may accrue from the program, increased pupil achievement is seen as the criterion of paraprofessional success.

A number of studies in the professional literature indicate that paraprofessionals do have a positive influence on pupil achievement, particularly in reading and number skills. Perhaps the earliest suggestion of such influence can be found in the 1968 American Institutes for Research survey of compensatory education programs. Of the 1,000 programs reported on from 1963 to 1968, AIR found only 23 that yielded "measured educational benefits of cognitive achievement." Ten of these programs involved the use of paraprofessionals.

The following studies describe situations in which pupil achievement gains were attributed to paraprofessionals working directly with pupils in the classroom. In Minneapolis, the Metropolitan Reading Readiness Test was administered in January and May of 1968 to nine kindergarten classes, three with no paraprofessional aides, three with one aide, and three with five aides. The classes with one aide showed a 50 percent greater gain than classes with no aide. Those with five aides did better than those with no aide, but not as well as those with only one aide.

In Greeley, Colorado, in a Title III ESEA program covering children in Grades K-3, a majority (47) of the 54 participants showed performance improvements which were attributed to the support of the instructional aide. Both teachers and principals agreed that the "... use of aides has led to better grouping, less pencil and paper busy work, more adult contact and help for children and more time to work cooperatively with other staff members...."

In Atlanta, Georgia, in a Title I ESEA program where 108 paraprofessionals worked in 47 poverty neighborhood schools, reading gains of third grade pupils were greatest in those classes that used paraprofessionals as compared with both other Title I and non-Title I schools that did not use them.

In Greenburgh, New York, the Metropolitan Achievement Test was used to measure the performance of second grade classes with paraprofessional aides. When compared with similar classes from the preceding school year when aides were not used, the number of classes scoring above grade level was found to have increased from two to five, while those scoring below grade level had decreased from five to four. The project director attributed the achievement test outcome to the introduction of teacher aides.

In Hammond, Indiana, paraprofessionals were used as specialists in a corrective reading program in Grades 6 through 8. In all three grades studied, reading gains for the experimental groups (those with paraprofessional tutors) exceeded the gains for the control groups (those without paraprofessional tutors). The Hammond model was thereafter adopted in some 50 projects in 12 states. In these projects, paraprofessional tutors were trained with 21 hours of programmed instruction, and then went on to tutor primary grade children 15 minutes a day, five days a week. These tutored children showed decisive reading improvement (as a result of the tutoring program) than did those in control groups.

Most recently, a cost-effectiveness study of the use of paraprofessionals in minority-enrollment public schools was conducted in Portland, Oregon. The central considerations in this study were the teaching division of labor within an elementary classroom, the cost analysis of instruction in single-teacher and teacher-aide classrooms, and the effect upon pupil reading scores of the team approach (teacher plus aide) to teaching. It was found that, with regard to the division of labor, teachers who worked with aides instructed for greater lengths of time than teachers in a single-teacher classroom. In fact, the aides actually spent more time instructing in remedial language arts instruction than the teachers themselves. With regard to the cost analysis of instruction, it was found that the average total cost of instruction in a teacher-aide classroom was $8.80, while the average total cost of instruction in a single-teacher classroom was $16.00. The model solution suggested by the author is a teacher-aide work arrangement that will allow for greater work specialization on the part of the teachers, thus increasing both the amount and the efficiency of instruction in a classroom. With respect to the effect of teacher-aide classrooms on student reading scores, it was found that paraprofessional instruction in remedial reading was a significant factor in effecting the upward shifts in achievement levels of disadvantaged children. Test score results were greatest among students in predominantly black-enrollment schools, while any decline in test scores was found in the scores of children in schools that were experiencing changes in racial composition of enrollment. Increased money expenditures for the compensatory program did, indeed, increase the reading achievement levels of disadvantaged children. The overall conclusion of the author of the study was that non-professionals (or paraprofessionals) contributed valuable services to educational institutions at a relatively low cost.

Many of the studies and much of the literature on the subject of paraprofessional influence on pupil achievement have been summarized and discussed in Chapter II of Allen Gartner's recent publication, Paraprofessionals and Their Performance. The studies cited have been credited with improving pupil cognitive and affective achievement. The majority of these has taken place in poverty-area schools, in the elementary grades, and have concentrated on reading and related language arts skills, number skills, and classroom organization patterns.

According to IED interview teams in the 1969-70 study, higher scholastic achievement was the most powerful impact of the paraprofessional program on pupils. It ranked second out of a total of 65 reported impacts on the five target populations studied (pupils, teachers, principals, parents, and the paraprofessionals themselves), and was outranked only by a changed role for the teacher in frequency of mention. Most teachers felt that they were using additional skills and accomplishing more with their pupils since having paraprofessionals in their classrooms. About half the teachers reported improved relationships with the children in their classes and said that they had gained a better understanding of the surrounding community and of minority group members as a result of working with paraprofessionals. About 90 percent of the pupils interviewed said that they enjoyed coming to school more since the initiation of the paraprofessional program, and this change in attitude was confirmed by responses from principals, parents, and teachers.

While teachers themselves ranked academic improvement highest by a wide margin among all other impacts of the paraprofessional program, and while principals, parents, and paraprofessionals reported that the pupils' social and personal growth as well as their academic achievement had been improved as a result of the program, IED did not make actual measurements of cognitive and affective gain or compare the growth of pupils in classes with paraprofessional services with that of pupils who had not enjoyed such services. Nor was any connection found between the kind of impact reported by teachers and the fixed or durable personal characteristics of paraprofessionals described as "most effective" or "least effective" by their school principals. These characteristics included age, sex, marital status, number of children, racial or ethnic background, income, education, previous job experience, and years of residence in New York City.

On the other hand, paraprofessionals rated "most effective" or "least effective" did differ in how they spent their time. The "most effective" paraprofessional more often reports significant information about the pupils to the teacher, gives direct instruction to the pupils, and plans with the teacher. This is in keeping with other findings of the study. That is, the paraprofessional is considered most effective when she is performing rather complex, genuinely semi-professional duties rather than when she is carrying out routine tasks.

To summarize, state and federal program guidelines as well as New York City project objectives established scholastic achievement as a primary goal for the use of paraprofessionals, the 1969-70 In-Depth Study gave strong evidence of the academic orientation and impacts of paraprofessional roles, and a number of studies found that the presence of paraprofessionals does, in fact, relate to pupil performance. In view of the fact that paraprofessional influence on pupil achievement is an intended, attempted, and possible outcome, IED directed its efforts in the 1970-71 study to examining this relationship in the New York City schools.

Chapter 3

SAMPLE SELECTION

The identification of a sample of classrooms is discussed in this chapter. The first step taken to select classrooms for the study was the identification of an appropriate grade level. Once this was accomplished, all schools that met certain criteria and were located in four boroughs were asked to participate. From the schools that responded positively to the request, 105 classrooms were selected for the final sample.

Selection of Grade Level

IED originally considered evaluating paraprofessionals in two grades, possibly Grades 2 and 4, so that results could be compared and contrasted. After further consideration and advice from consultants, however, it was decided to limit the evaluation to one grade level. The choice of a single grade level meant that IED could increase the number of classroom observations and test scores available for a single statistical analysis, thereby raising the probability of finding statistically significant differences between classrooms with paraprofessionals and classrooms without paraprofessionals. In selecting a grade level, IED took into consideration the grades in which paraprofessionals were most frequently used in the City schools. Classroom paraprofessionals are concentrated in the primary grades (Grades K-3), although there are a large number of paraprofessionals in the intermediate grades as well. IED chose to observe paraprofessionals in Grade 3 classrooms because that grade comes in the middle of the span of school years in which paraprofessionals are used, thus permitting an extrapolation of the findings both downward and upward to other grades. In addition, since all but one set of the necessary reading and arithmetic pre-test and post-test scores for Grade 3 were available through the City's standardized test program, the selection of Grade 3 meant that IED would not have to inconvenience the teachers with several additional tests.

Selection of Classrooms

IED wished to obtain a sample of 105 classrooms, 70 of them with paraprofessionals and 35 of them without paraprofessionals. A sample of 70 was large enough to be split in half to study variables of interest -- such as ethnic background of paraprofessionals -- without reducing the halves below the point at which tests of statistical significance would be likely to show differences. The sample of 35 comparative classrooms without paraprofessionals was large enough to test against the separate halves of the paraprofessional classrooms. (IED had no reason to split the sample of 35 comparison classrooms.) Moreover, the full sample of 70 classrooms with paraprofessionals could be analyzed in the aggregate, yielding a group of substantial size.

As its source for identifying third grade classrooms, IED used a listing of schools in which district decentralized ESEA Title I and New York State Urban Education projects were conducted during 1969-70. Since this listing, as well as the results of IED's 1969-70 In-Depth Study, indicated there were more paraprofessionals employed in Manhattan and in Brooklyn than in the other three boroughs, IED first approached elementary schools in these two boroughs for its selection of sample classrooms.

On November 12, 1970, letters were sent to the principals of 109 elementary schools in Manhattan and Brooklyn explaining the study and asking for their participation. At the same time, letters were sent to community superintendents and to the district coordinators for district decentralized ESEA Title I and New York State Urban Education projects in each of the districts in which those 109 schools were located. These letters to district administrators explained the purposes and procedures of the study and listed the schools in each district that were being asked to take part.

Each principal was asked to nominate one or more sets of three comparable third grade classrooms, two of them with a paraprofessional and one without a paraprofessional. The classrooms nominated were to be comparable in terms of teacher age and experience, the ability level of the pupils, and the reading and arithmetic curriculum programs being used. The paraprofessionals chosen were to be educational associates, educational assistants, or teacher aides and were to be working directly with the teacher both in reading and arithmetic. In addition, the paraprofessionals were to be funded either by district decentralized ESEA Title I or New York State Urban Education funds.

When the initial response indicated that, for various reasons discussed in the next section, a full sample could not be obtained from the Manhattan and Brooklyn schools, IED decided to approach elementary schools in the Bronx to complete the sample. On November 24, 1970, the mailing process was completed for 41 elementary schools in the Bronx. That is, letters were mailed to the principals of the individual schools being asked to participate and letters were mailed simultaneously to community superintendents and district coordinators for district decentralized ESEA Title I and New York State Urban Education projects. As a result, additional classrooms were obtained for the sample.

In January, 1971, IED was asked by the Bureau of Educational Research to extend its evaluation to include all projects listed in Group H of ESEA Title I and Group 8 of the New York State Urban Education Program in decentralized districts. Group H and Group 8 constituted those projects in which the primary service to children came through the employment of paraprofessionals. (Many other programs in New York City supported by ESEA Title I and the Urban Education Program employed paraprofessionals, but only as a single feature of a larger project. Group H and Group 8 projects depended on paraprofessionals as the primary program element. (See Appendix A, p. A-2.) Of the districts listed in Group H and Group 8 projects, all but three (District 22 in Brooklyn and Districts 29 and 30 in Queens) were already represented by the sample classrooms that had been drawn previously.

In Districts 22 and 29, the projects to be evaluated employed non-classroom paraprofessionals and were therefore evaluated by the procedures outlined in Book II of this report.

In District 30, only three elementary schools appeared in the Group H and Group 8 projects. When contacted by telephone, principals in two of these three schools agreed to provide IED with sample classrooms containing paraprofessionals. Since some of the original classrooms had been forced to drop out of the sample by that time (January, 1971) due to the resignation or reassignment of teachers or paraprofessionals, IED was able to use the sample classrooms from District 30 to restore the sample to full size. And since field observations had not yet begun, these schools were able to participate in the evaluation study from the beginning.

Schools and Classrooms Participating

As indicated above, a total of 153 elementary schools (as distinct from classrooms) in Manhattan, Brooklyn, the Bronx, and Queens were asked to participate in the study of classroom paraprofessionals. Of these, 116 schools, or 75 percent of the total, responded to the IED request. The 116 that responded included a number of schools that did not meet the criteria for sample selection. Those ineligible included schools having no third grade paraprofessionals, schools having paraprofessionals who did not work in individual classrooms, schools having paraprofessionals who worked only in the area of reading, and schools in districts that had hoped to conduct their own evaluation of paraprofessionals. Of the 116 schools, 70 schools, or 60 percent of the total, were either ineligible for one of the reasons cited above or else, in the case of a small minority, did not wish to take part in the study.

From the remaining 46 schools IED chose the 40 schools that had responded earliest and asked them to provide the 105 classrooms needed for the sample. From the 40 schools a total of 105 classrooms--70 classrooms with a paraprofessional and 35 classrooms without a paraprofessional--were selected based on the nominations of school principals. The schools were located in 14 separate school districts in New York City, with Manhattan and Brooklyn having a heavier representation than the Bronx and Queens because of the more widespread use of paraprofessionals in Manhattan and Brooklyn.

The breakdown by boroughs, schools, and types of classrooms was:

Borough	Number of schools	Classrooms	
		With paraprofessionals	Without paraprofessionals
Manhattan	17	26	17
Brooklyn	14	22	12
Bronx	7	15	6
Queens	2	7	0
Total	40	70	35

Each principal had been asked to nominate at least one set of comparable third grade classrooms from his building -- two with a paraprofessional and one without a paraprofessional. In 18 of the 40 schools, principals identified at least one set as requested. In an additional 15 of the 40 schools, principals were able to identify two comparable third grade classrooms -- one with a paraprofessional and one without a paraprofessional. In the seven remaining schools, the sample classrooms were all of one type--either all with a paraprofessional or all without a paraprofessional. In some cases, this was a result of changes made after the total school was accepted, as when paraprofessionals were either added to or dropped from a sample classroom. In the case of the two District 30 schools added late, only classrooms with paraprofessionals were needed, since a sufficient number of classrooms without paraprofessionals had been obtained prior to the Bureau of Educational Research request to extend the evaluation to include all Group H and Group 8 projects--the request which led to the addition of those two schools. The fact that principals in 30 out of the 40 schools nominated sets of classrooms they considered comparable largely eliminated the bias which might have come by drawing all paraprofessional classrooms from one set of schools and all comparison classrooms from another set. (This method of sample selection did not eliminate differences between classrooms with and without paraprofessionals, as will be shown later, but it did largely eliminate variations in schools as the source of such differences.)

During the course of the study, the sample of 105 classrooms fell to 98 classrooms. (See Appendix B, p. A-5 for a listing of classrooms.) The loss of sample classrooms was due primarily to the reassignment or termination of positions either by teachers or by paraprofessionals, both of whom were required to be available throughout the study, since classroom observers recorded data on the behavior of both. The breakdown of the 98 classrooms for which complete data were gathered was as follows:

Borough	Number of schools	Classrooms	
		With paraprofessionals	Without paraprofessionals
Manhattan	17	25	17
Brooklyn	12	20	12
Bronx	6	11	6
Queens	2	7	0
Total	37	63	35

Characteristics of the Study Population

After the sample of classrooms had been drawn, an analysis showed the following characteristics for pupils, paraprofessionals, and teachers.

Pupils

Results for pupils are given in Appendix E, p. A-131. An examination of the total sample shows that a total of 2,821 third grade students were drawn, 1,771 in the experimental group (classes with paraprofessionals) and 1,050 in the control group (classes without paraprofessionals). In the total sample there were somewhat more boys than girls; Blacks and Puerto Ricans combined made up 75 percent of the total; and over half the students were absent at least seven days from September through April in 1970-71. The analysis also shows that teachers expect about as many of their students to do well in school as to do poorly--just over 20 percent in each case.

The control group has proportionately more girls and fewer boys than the experimental group, more Blacks, and approximately the same record of absences. In the opinion of their teachers, children in the control group had appreciably higher potential for doing well in school, confirming other evidence that paraprofessionals are assigned to classes where they are most needed.

Within the experimental group the ratio of boys to girls given special attention by paraprofessionals, in both reading and arithmetic, was greater than the total ratio of boys to girls. In proportion to their numbers, more Puerto Ricans than Blacks or Whites got direct paraprofessional help, both in reading and in arithmetic. Not surprisingly, teachers more often assign paraprofessionals to children who are frequently absent and to children who, in the teacher's judgment, have a low potential for academic success in school. A typical candidate for paraprofessional help is a Puerto Rican boy with a poor attendance record and a low potential for achievement in school.

In general, these findings are in accord with what IED found during the 1969-70 In-Depth Study. That is, paraprofessionals are assigned chiefly to children who especially need their help.

Paraprofessionals

Results for paraprofessionals are given in Appendix E, pp. A-132-A-138. A total of 60 of the 63 participating paraprofessionals completed questionnaires providing information on a range of personal and job characteristics.

The paraprofessionals represent a variety of age levels. Seventy percent of them are well distributed in the range between 25 and 44 years of age. All but two of them are female; most are married and are long-time residents of New York City.

Over one-half are Black and nearly one-fifth are Puerto Rican. Together, these two minorities constitute 75 percent of the population studied.

Most of the paraprofessionals have children between the ages of five and twelve living at home. The family income is quite low: Nearly one-half of the paraprofessionals report a total income under $5,000. Most often, three to four family members are dependent on this sum.

Over three-fourths of the paraprofessionals have at least completed the twelfth grade, and nearly 25 percent of these have had one or more years of college.

All the paraprofessionals hold classroom-oriented positions--as educational assistants, educational associates, or teacher aides. (This, of course, was a prerequisite for their inclusion in the study.) The typical paraprofessional reported working 26 to 30 hours per week. The paraprofessionals appear to distribute their time equally between Black and Puerto Rican students.

The typical paraprofessional has worked two years in this role and has had part-time in-service training. She spends most of her work time teaching reading and arithmetic.

Teachers

Results for teachers are given in Appendix E, p. A-140. A total of 95 of the 98 participating teachers offered information to describe themselves.

Over one-half of the teachers were between the ages of 20 and 24, and about three-fourths were under 30 years of age. Nearly 50 percent of these teachers reported that they were doing graduate work leading to an advanced degree. Over one-half of these young teachers have had less than four years of teaching experience, while only 10 percent of teachers reported ten or more years of teaching. Most of the teachers reported that their few years of teaching experience was in an urban school system; practically none of them had any experience in either a suburban, small-town, or rural school system. The majority of the teachers in this study have spent their previous teaching years in Grade 3. Fewer than 25 percent could report experiences in any other single grade.

Sixty-five percent of the total population of teachers gave paraprofessionals an overall rating of "excellent" or "good." (Teachers without paraprofessionals in classrooms this year based their rating on paraprofessionals observed in the school.) Of the 61 teachers in experimental classrooms (those with paraprofessionals), over three-fourths expressed a desire for a paraprofessional the following year; slightly more than 11 percent felt that they did not want a paraprofessional again or were uncertain. Over one-half of the teachers in control classrooms expressed the desire to have a paraprofessional assigned to their classroom in the following year, and an additional 15 percent said they were willing to consider this move.

Chapter 4

INSTRUMENT SELECTION AND DEVELOPMENT

Instruments had to be selected or developed for a cluster of dependent variables and a larger cluster of independent variables. The table on the following page lists all dependent variables and all independent variables and shows the instruments selected or developed to measure each. In some cases a single instrument was used to gather data on more than one variable; in other cases it was necessary to use two instruments to gather data for a single variable. Those relationships are also displayed in the table.

Selection of Dependent Variables and Instruments

The following dependent variables were selected as constituting the major targets of classroom paraprofessionals:

student achievement in reading

student achievement in arithmetic

student attitudes toward themselves

student attitudes toward school

student attitudes toward school subjects

IED had learned during its 1969-70 In-Depth Study that written descriptions of paraprofessional projects give as a key objective the improvement of student academic achievement. Moreover, that study also showed the following proportions of paraprofessionals spending time teaching or tutoring students in various subject areas:

Subjects	Percent of Paraprofessionals
Reading	67%
Language Arts-English	25
Math or Arithmetic	47
History or Social Studies	13
Art and Music	9
Science	9
Physical Education	7
Languages	6
Vocational Subjects	1

In short, the In-Depth Study showed that student achievement in reading and arithmetic are central targets for classroom paraprofessionals --much more so than any other subject areas.

DATA COLLECTION INSTRUMENTS	DEPENDENT VARIABLES Student Achievement in Reading	Student Achievement in Arithmetic	Student Attitudes Toward Themselves	Student Attitudes Toward School	Student Attitudes Toward School Subjects
Metropolitan Reading Test, Form B Prim. I & Upp. Prim. (Pre-Test)	X				
Metropolitan Reading Test, Form F Elem. & Prim. II (Post-Test)	X				
Metropolitan Arithmetic Test Form F, Prim. II (Pre-Test)		X			
Metropolitan Arithmetic Test Form G, Prim. II (Post-Test)		X			
Omnibus (student attitude inventory)			X	X	
Pictures (student attitude inventory)			X	X	X
Amidon Expanded Category System					
Reading Textbook Behaviors Checklist					
Arithmetic Textbook Behaviors Checklist					
Media Checklist					
Grouping of Students					
Instruction Time					
Students Receiving Attention					
Background Information on Paraprofessionals in New York City Schools					
Job Descriptions for Paraprofessionals in New York City Schools					
Training of Paraprofessionals					
Principal's Paraprofessional Report					
Teacher's Report					
Student Roster					

INDEPENDENT VARIABLES																			
General Teacher Behaviors																			
Indirectness, Use of Student Ideas							X	X	X										
Variety of Questions							X												
Task Orientation							X												
Matter-of-fact Approach							X												
Praise and Reinforcement							X												
Criticism							X												
Clarity								X	X										
Rate of Interchange							X												
Variety of Media								X	X	X									
Individual Attention								X	X		X		X						
Organization a. Class							X	X	X	X			X						
b. Lesson							X	X	X										
Warmth							X												
Subject-Specific Teacher Behaviors																			
Reading Behaviors								X	X				X						
Arithmetic Behaviors								X	X				X						

	DATA COLLECTION INSTRUMENTS																		
	Metropolitan Reading Test, Form B Prim. I & Upp. Prim. (Pre-Test)	Metropolitan Reading Test, Form F Elem. & Prim. II (Post-Test)	Metropolitan Arithmetic Test Form F, Prim. II (Pre-Test)	Metropolitan Arithmetic Test Form G, Prim. II (Post-Test)	Omnibus (student attitude inventory)	Pictures (student attitude inventory)	Amidon Expanded Category System	Reading Textbook Behaviors Checklist	Arithmetic Textbook Behaviors Checklist	Media Checklist	Grouping of Students	Instruction Time	Students Receiving Attention	Background Information on Paraprofessionals in New York City Schools	Job Descriptions for Paraprofessionals in New York City Schools	Training of Paraprofessionals	Principal's Paraprofessional Report	Teacher's Report	Student Roster
INDEPENDENT VARIABLES (cont'd.) Amount of Time Spent on the Subject Matter												X							
Names of Students Receiving Attention from Teacher and/or Paraprofessional													X					X	
Paraprofessional Characteristics, Job Descriptions, Training, and Performance														X	X	X	X		
Teacher Characteristics																		X	
Student Characteristics and Performance																		X	X
Other Auxiliary Personnel																		X	

The same study determined from an analysis of the project proposals that they intended to change student attitudes toward themselves and toward school. Additional evidence of this lay in the fact that over 80 percent of all paraprofessionals came from non-White minorities, about 55 percent being Black and about 18 percent being Puerto Rican, figures in proportion to the number of disadvantaged pupils in New York City coming from those minority groups. This pattern arises from a belief that matching ethnic backgrounds of students and paraprofessionals enhances communication between them and provides models of success for the students. Finally, the study showed that out of 175 possibilities, the two job activities mentioned most frequently by all paraprofessionals were 1) talking quietly to a child who is upset or disturbing the class (71%) and 2) stopping arguments and fights among students (67%). These two activities, and others like them mentioned by paraprofessionals, presumably are intended to improve student attitudes toward themselves and toward school. The fact that paraprofessionals spend most of their time in reading and arithmetic led to the assumption that pupil attitudes toward those specific school subjects would be special targets for classroom paraprofessionals.

Selection of Instruments for Measuring Dependent Variables

In considering which achievement tests would be best for measuring the effects of paraprofessional services on pupil reading and arithmetic growth, IED looked at a range of available tests, including those used by New York City in its standardized testing program.

The Metropolitan Reading Test and the Metropolitan Arithmetic Test, both part of the testing series already employed by New York City, were selected for a number of reasons. First, the City's choice of the test indicated that school officials consider them appropriate for the reading and arithmetic curriculum. Second, the fact that principals, teachers, and pupils were all familiar with the tests promised more reliable test results than if a wholly new and unfamiliar series had been introduced. Third, previous City use of the tests provided IED both with a history of test results for individual schools and decentralized districts as well as pre-test scores for reading achievement (Spring, 1970, administration in Grade 2). Fourth, by using the City's own schedule for standardized testing during 1970-71, IED did not have to inconvenience the participating schools with a number of additional and perhaps unwelcome tests. Only one test, the post-test in arithmetic, had to be administered in addition to those used in the regular testing program.

The standardized achievement tests used were as follows:

	Name of Pre-Test and Date of Administration	Name of Post-Test and Date of Administration
Reading	Metropolitan Reading Test Form B, Primary I and Upper Primary Levels March 17-18, 1970	Metropolitan Reading Test Form F, Elementary and Primary II Levels April 1-2, 1971
Arithmetic	Metropolitan Arithmetic Test Form F, Primary II Level January 28-29, 1971	Metropolitan Arithmetic Test Form G, Primary II Level June 2-9, 1971

In considering which of the available paper-and-pencil attitude inventories might be used to measure the students' feelings about themselves, about school, and about school subjects, IED examined available instruments and sought the advice of consultants. The fact that third grade children with rather limited reading abilities would be given the attitude inventories led to the choice of instruments with simple verbal content. Moreover, IED wanted instruments that had been used previously and had proved satisfactory with younger children. Dr. Samuel Ball of the Educational Testing Service who had recently faced practical measurement questions with a similar (but younger) population of children in an evaluation of Sesame Street examined a selection of instruments and made recommendations.

The two instruments chosen from among those available were "Omnibus" and "Pictures." The "Omnibus" instrument is a 25-statement measure of self-esteem and attitude toward school. It was developed by Educational Testing Service especially for use in evaluation of ESEA Title I projects similar to those in New York City. (See Appendix C, p. A-9.) "Pictures" is a 30-question instrument measuring a child's feelings toward specific subjects, including reading and arithmetic. It uses drawings as mnemonic devices to aid students with their responses. It is available from the Instructional Objectives Exchange at the University of California, Los Angeles. (See Appendix C, p. A-1.)

Selection of Independent Variables and Instruments

IED next sought to identify a set of independent variables which might be related to student achievement and student attitudes. An elaborate search produced a long list. The items on that list were placed into the following categories:

1. General teacher behaviors
2. Subject-specific teacher behaviors
3. Amount of time spent on the subject matter
4. Names of students receiving attention from teacher and/or paraprofessional
5. Information on paraprofessional backgrounds, work, and training
6. Information on teacher characteristics
7. Information on student characteristics

The several categories of variables and the instruments chosen to measure them are discussed below.

Selection of Teacher Behaviors

General Teacher Behaviors. The first search was for behaviors of classroom teachers that had been previously established as associated with student achievement. The research literature was examined and various experts in the teaching of reading and arithmetic, as well as experts in the study of classroom observation systems, were consulted. Inasmuch as the 1969-70 In-Depth Study had established that many classroom paraprofessionals instruct elementary school children in reading and arithmetic, usually in small groups or as individuals, it was assumed that behaviors which are effective when used by classroom teachers are also effective when used by paraprofessionals. There is very little direct research evidence available on the relationship between particular paraprofessional teaching behaviors and pupil learning, but the assumption seemed to be a reasonable beginning point.

Before beginning its search, IED sought advice from Dr. Barak Rosenshine of the University of Illinois, who had just completed a survey of the research literature on teacher behaviors which are associated with pupil cognitive growth. His survey cited a large number of relevant studies, which IED subsequently examined. In addition, Dr. Philip Harris of the Reading Center at Indiana University referred IED to a number of studies on teacher behaviors specifically related to reading achievement. Dr. Marilyn Sudyam of Pennsylvania State University provided a number of citations to research reports on teacher behaviors directly related to arithmetic achievement.

IED was able to isolate 12 teacher behaviors previously found to be related to pupil cognitive development. Those 12 behaviors, ranked by frequency of mention, but not necessarily by order of importance in their influence on student learning, are:*

1. teacher indirectness and use of student ideas;
2. teacher use of variety--i.e., variety of teaching procedures and variety of instructional materials;
3. teacher avoidance of strong criticism, especially personal attacks, shaming, or sarcasm;
4. teacher use of praise and reinforcement, especially when a reason for the praise is given;
5. teacher attention to and awareness of individual pupil needs and difficulties;
6. teacher emphasis on intellectual activity, or task orientation;
7. teacher warmth toward pupils--i.e., a sympathetic and supportive attitude;
8. teacher involvement of many pupils in the learning process;
9. teacher encouragement of a high rate of interchange between herself and students;
10. teacher clarity in presenting the objectives and content of lessons to the ability level of the pupils;
11. teacher emphasis on a matter-of-fact approach to learning, as opposed to one that emphasizes either frequent praise or frequent criticism;
12. teacher organization of both classroom structure and lesson structure.

The first three behaviors--teacher indirectness, teacher use of variety, and teacher avoidance of strong criticism--have been most frequently mentioned in the research literature. Their importance is supported by a number of studies.

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* It seemed quite clear from the search of the literature that what has been studied in detail recently are those behaviors measured by the teacher-pupil interaction instruments that were created in large numbers after the original work by Flanders.

Teacher indirectness and use of student ideas is mentioned most frequently in these studies as a behavior closely linked to pupil cognitive growth. The Encyclopedia of Educational Research, 1969, cites a number of studies showing that those teachers who make use of student-expressed ideas and opinions tend to have classes with more positive attitudes and higher achievement scores. Rosenshine cites eight studies, four by Flanders and four by other authors, on "teacher use of student ideas" and "indirectness " demonstrating a positive correlation between use of student ideas and measures of student achievement.

Teacher use of variety is defined in a number of different ways, but the term is ordinarily used to designate a variety of teaching methods and instructional materials and a flexibility in using them. Rosenshine, Fey, Perkins, and Connors and Eisenberg all reported that variety in teacher use of techniques and materials is closely related to student achievement levels. In eight studies cited by Rosenshine, student achievement was significantly increased in classrooms where a variety of instructional procedures and materials was provided and where the teacher varied the cognitive level of discourse and student tasks. Fey asserted that "any natural teaching strategy consists of a variety of instructional type components." Perkins listed variety in methods and plans as one of the characteristics of a successful mathematics teacher. Connors and Eisenberg related four teacher characteristics, among which were variety and "flexibility", to a rise in verbal IQ scores of Operation Headstart children.

Teacher avoidance of strong criticism, especially criticism in the form of sarcasm and personal attacks, is another important behavior. While the avoidance of criticism has not itself been specifically investigated, the relationship between strong criticism and student achievement levels has been studied. A number of studies cited by Rosenshine showed a negative relationship between those two variables. Ellson, Harris, and Barber compared programmed tutoring and directed tutoring to find the best way to increase the reading levels of disadvantaged children. Pupils in the programmed tutoring program, which was highly individualized and which emphasized praise for pupil achievement while de-emphasizing criticism, showed a significantly higher achievement level at the end of the study than did pupils in the directed tutoring program, who had merely been given extra reading time and drill.

The next six behaviors in the list of 12--teacher use of praise and reinforcement, teacher attention to individual needs, teacher emphasis on intellectual activity, teacher warmth, teacher involvement of many pupils, and teacher encouragement of a high rate of interchange--have been mentioned in the research literature almost as frequently as the first three. As indicated above, however, frequency of mention does not necessarily mean order of importance.

Teacher use of praise and reinforcement has been found to be related to achievement gain, especially in those cases where a reason for the praise or reinforcement is given. Albert Harris pointed out that praise is most effective as a motivational technique when a reason is given and is not necessarily effective if it is used frequently without a reason being given. He asserts that frequent praise (like frequent criticism) may be more harmful than helpful, since pupils may suspect that they are being "babied" rather than treated as equals. In the Ellson, Harris, and Barber study referred to above, each correct answer was reinforced by praise from the teacher, and each incorrect answer was ignored. The reinforcement technique was one of the factors to which the authors attribute their success in raising reading scores. One of the six teacher behaviors listed in Wright and Nuthall as being related to student achievement was teacher use of thanks and praise.

Teacher awareness of and attention to individual needs and difficulties is mentioned often in the professional literature. Ellson, Harris, and Barber, in addition to reinforcing correct answers with praise and ignoring incorrect ones in the programmed teaching group, allowed for individual pupil abilities by letting each pupil progress at his or her own learning rate. Richard Turner, in three studies dealing with teacher skills and pupil achievement in arithmetic, found that those teachers who were given a high rating by their supervisors were judged primarily on their ability to diagnose individual difficulties in learning arithmetic and their skills in presenting appropriate materials for the level or levels of the children they taught. Albert Harris cited an awareness of and attention to individual needs as one of the general characteristics of good teaching.

The idea of task orientation, or teacher emphasis on intellectual activity, was mentioned by Connors and Eisenberg, Albert Harris, and a number of the authors cited by Rosenshine. Connors and Eisenberg classified their sample classrooms, in part, on the stress given to obedience and that placed on intellectual values. They found that the verbal growth had been greatest in the classrooms where teachers had concentrated on intellectual activities and that little verbal growth had taken place in classrooms that stressed the care of classroom property and materials. Harris and Serwer, in their CRAFT project, found that the more emphasis placed on a specific activity--basal reading, writing, etc.--the greater the achievement gain. Reading time correlated positively with reading achievement, while "supportive" time did not.

Teacher warmth toward pupils was cited by Perkins and Connors and Eisenberg as an important characteristic of successful teaching. Perkins listed "warm personal relationships" and "encouraging and accepting attitudes" as major characteristics of successful mathematics teachers. Conners and Eisenberg found that teachers who scored high on warmth and three other characteristics (variety, activity, and permissiveness) produced change in verbal IQ scores of Operation Headstart children.

Teacher involvement of many students in the learning process and teacher encouragement of a high rate of interchange have been found to be desirable because a high degree of communication between teacher and student indicates that both are taking an active part in the learning process. Connors and Eisenberg concluded that those classrooms in which there was a high degree of communication and intellectual activity and a moderate degree of management and encouragement represented optimal situations for producing increases in verbal IQ scores. However, high degree of communication is not the same as high number of teacher statements, as Albert Harris pointed out, since the latter could reflect disciplinary as well as content-oriented communication. Harris stressed that a high interchange rate between teacher and students and among the students themselves is necessary for achievement gains. Wright and Nuthall found that the frequency of redirection of a question was one of the teacher behaviors significantly related to achievement, since this process involved more pupils in learning.

The last three behaviors isolated from the literature--teacher clarity, teacher emphasis on a matter-of-fact approach, and teacher organization--while least frequently mentioned of the 12, are nevertheless supported by an impressive set of studies.

Teacher clarity in presenting the objectives and content of lessons appears to be essential for pupil cognitive gain. Rosenshine cites several studies in which classroom observers rated teachers on their clarity--e.g., the clear explanation of concepts, the adjustment of the cognitive level of the lesson to the ability level of the students, and clarity of presentation. He suggests that rating such teaching behaviors requires observers to draw inferences and suggests that other teaching behaviors which can be counted rather than rated can give better measurements. For example, the amount of time spent answering student questions that request interpretation of teacher statements, the number of times questions have to be rephrased before they can be answered, and the number of vague words--"some," "many," "a little"--used by the teacher have all been studied in an attempt to define what "clarity" means. Wright and Nuthall concluded that there seemed to be a strong relationship between pupils' learning and teachers' linguistic precision and clarity (lack of vagueness, careful structuring).

Teacher emphasis on a matter-of-fact approach to learning is cited by Albert Harris as a very important factor in pupil cognitive development. The use of praise (given for a specific reason) and a teaching methodology that avoids both frequent praise and frequent criticism seem to be highly effective in the teaching of reading. Pupils are more likely to be motivated when they are treated as equals rather than "babies" or "beasts." Rosenshine cited two studies in which the teachers were rated on their concern with students' learning in contrast to students enjoying themselves. A balance between these two concerns appeared to be desirable.

Both classroom structure and lesson structure evidently are related to pupil growth. Albert Harris cited concern with classroom structure and organization as a characteristic of a good teacher. An overemphasis on classroom structure, however, may retard growth, as Connors and Eisenberg found when they showed that classrooms with stress on caring for property and materials showed less pupil verbal IQ growth than classrooms with the stress on intellectual activities. Rosenshine discussed teacher use of "structuring statements" in four studies in which significant results have been obtained. Among the criteria used to identify structuring are teacher statements that precede a question, statements that summarize an interchange, the use of a clear signal to indicate when one part of a lesson ends and another begins, and verbal markers of importance (e.g., "Now get this"). Wright and Nuthall found that, with regard to structuring, the science teacher who introduced information at the end of an episode initiated by a question, rather than at the beginning, was more likely to produce higher achievement in pupils.

Subject-Specific Teacher Behaviors. IED's second major search was for specific behaviors of classroom teachers and paraprofessionals that had been found (or were thought) to be directly related to pupil achievement in reading and in arithmetic. To repeat, the 1969-70 In-Depth Study had shown that classroom paraprofessionals often teach reading and arithmetic to elementary school children in small groups or as individuals. It was assumed that specific behaviors found effective in reading and arithmetic would also be effective when used by paraprofessionals. While there was little research evidence available to underpin this assumption, it nevertheless seemed to be reasonable.

Dr. Philip Harris of the Reading Center at Indiana University suggested that since the research literature did not give a long roster of specific teacher behaviors related to reading achievement, IED could arrive at a list another way. He proposed that the teacher manuals of several of the basal reading series most widely used in the New York City schools be examined, since the authors were qualified to recommend techniques for teaching. At least, the accumulated experience and wisdom of the authors would appear in those teacher manuals. Dr. Harris suggested that those teacher behaviors mentioned by more than one could be selected for attention. Following his proposal, IED identified 16 reading-specific teaching behaviors as being frequently mentioned in the teacher manuals.

Dr. Marilyn Sudyam of Pennsylvania State University, in advising IED on sources of specific teaching behaviors in arithmetic, suggested that Dr. Harris' proposal concerning teacher manuals in reading could be followed with the teacher manuals of the most widely used arithmetic textbooks in the New York City schools. In following Dr. Sudyam's suggestion, IED also examined Scope and Sequence for Grade Three Mathematics, issued by the New York City Board of Education, and searched various books and monographs on the teaching of modern arithmetic in addition to using the teacher manuals for the arithmetic textbooks most widely used in the City elementary schools. The final list contained 13 arithmetic-specific teaching behaviors, five of which duplicated behaviors that appeared on the reading list.

Selection of Instruments for Measuring Teacher Behaviors

As shown in the table which appears early in this chapter, IED had to select or develop a number of instruments to measure the 12 general teacher behaviors, the 16 reading teaching behaviors, and the 13 arithmetic teaching behaviors which it had identified. The following five instruments were used:

Amidon Expanded Category System

Reading Textbook Behaviors Checklist

Arithmetic Textbook Behaviors Checklist

Media Checklist

Grouping of Students

The selection of each of the five is discussed below.

Amidon Expanded Category System. Once IED had isolated the general teacher behaviors and the specific teacher reading and arithmetic behaviors to be studied, it reviewed the existing instruments that might be used to measure them. Mirrors for Behavior, a 15-volume encyclopedia of observation instruments edited by Simon and Boyer, proved to be an excellent single source. A few instruments not listed in that collection were also considered.

From Mirrors for Behavior, IED selected the following 11 possible observation instruments, varying in content and complexity.

1. Amidon System (Modified Category System, MCS) (This had since been modified to the Expanded Category System, ECS)
2. Amidon-Hunter System (Verbal Interaction Category System, VICS)
3. Flanders System (Flanders System of Interaction Analysis, FSIA)
4. Flanders System (Flanders Expanded System)
5. Hough System
    a. An Observational System for the Analysis of Classroom Instruction
    b. Classroom Interaction and the Facilitation of Learning: The Source of Instructional Theory

6. Medley System (Observation Schedule and Record, OScAR 4V) (This had since been modified to OScAR 5V)

7. A. Anderson System (An Analysis of Instructor-Student Classroom Interaction)

8. Hunter System (Revised Verbal Interaction Category System, Revised VICS)

9. Withall System (Social Emotional Climate Index)

10. Ashner-Gallagher System (Classifying Thought Processes in the Context of Classroom Verbal Interaction)

11. Smith System (A Study of the Strategies of Teaching)

It was evident on inspection that a number of these systems owed their origin to initial work by Flanders. All 11 systems were designed to record the verbal behaviors of both teachers and pupils in classroom situations. All contained items which appeared to be addressed to the affective as well as to the cognitive realms.

IED constructed a 12 x 11 matrix matching the 12 teacher behaviors against the 11 observation systems. Each instrument was judged on its ability to measure each of the specified behaviors. No instrument considered could measure all 12 behaviors and several could measure only a few. In addition to constructing the matrix, IED consulted with Dr. Anita Simon of Research for Better Schools, Inc., on the suitability of each system.

After eliminating those that were not addressed to the 12 behaviors or were not suitable for practical reasons such as complexity, cost, type of observer, and amount of training required, four systems remained as possibilities:

1. Flanders (Flanders Expanded System)

2. Hunter-Amidon (Verbal Interaction Category System, VICS)

3. Amidon (Expanded Category System, ECS)

4. Medley (Observation Schedule and Record, OscAR 5V)

Conversations with the authors concerning the availability of training materials and a trainer narrowed the field still further. IED's final choice was the Amidon system.

The Amidon Expanded Category System consists of 10 major categories of verbal interaction (broken into 30 sub-categories) for indicating whether the teacher or pupil is talking and for classifying the content of each statement. For a list of the 10 major categories and 30 subcategories, see the Amidon instrument in Appendix C, p. A-21.

The Amidon instrument measured 9 of the 12 teacher behaviors isolated by IED as related to pupil cognitive development as indicated on the chart at the beginning of this chapter. It measured some of the nine obliquely or partially. The three that were not measured at all by Amidon were clarity, variety of media, and individual attention. The additional instruments discussed below were used to measure those three teacher behaviors and to supplement the measurement of some of the nine not adequately addressed by the Amidon instrument.

Reading and Arithmetic Textbook Behaviors Checklists. In developing these two checklists pursuant to suggestions of consultants, as explained earlier, IED eliminated the instructions given by the teacher manuals regarding the choice of subject content in reading and arithmetic. This was done because IED observers would be making only a limited number of visits to classrooms and it would be impossible to gather adequate data on the content of instruction during those few visits. Thus the instruments were limited to the observable teaching methods most frequently mentioned by the manuals as desirable. Previous research has indicated that such teaching methods do not vary greatly over time.

The checklists were designed to record observations of paraprofessional behavior as well as teacher behavior. They asked the observers to rate how often (rarely, occasionally, frequently) the behavior occurred during the observation. Both instruments appear in Appendix C, p. A-23-24.

In addition to data on behaviors specific to reading and arithmetic, the reading and arithmetic checklists gathered data on the three general teacher behaviors not measured by Amidon (clarity, variety of media, and individual attention) and gathered supplementary information on three general behaviors which had been measured by Amidon. All the behaviors measured by the reading and arithmetic checklists are displayed in the table at the beginning of this chapter.

Media Checklist. To supplement the information on media use gathered by the reading and arithmetic textbook behaviors checklists, IED adapted John Herbert's System for Analyzing Lessons, SAL, Part D. Part D is a 71-item media checklist modified by IED to indicate whether the paraprofessional--in addition to the teacher or the pupils--uses designated media. Observers were instructed to complete the checklist at the close of each reading and arithmetic observation. (See Appendix C, p. A-25.)

Grouping of Students. To supplement the information on grouping of students gathered by the reading and arithmetic textbook behaviors checklist, IED modified the Amidon coding sheets so that the observer could indicate whether the teacher or paraprofessional being observed was working with the total class, a group or set of groups smaller than the total class, or an individual student. Observers were asked to make this indication every three seconds when entering a tally on the scoring sheets. (See the Amidon scoring sheet in Appendix C, p. A-28.)

Instruction Time

Because both the research literature and IED's consultants emphasized the importance of the amount of time given to the teaching of reading or arithmetic, IED developed a brief questionnaire to be administered at the end of each observation. The person being observed (teacher or paraprofessional) was asked to indicate how much time had been spent on the subject (reading or arithmetic) during the lesson just observed (observers were not always present for the complete lesson), how much time had been given to that subject on the previous school day, and how much time was given to it during an average school week. In this way, both teachers and paraprofessionals were asked separately on several occasions (five in reading and two in arithmetic) to estimate how much classroom time was typically devoted to teaching the two subjects. IED assumed that these multiple estimates, made by teachers and paraprofessionals at several points in time, would be more valid than a single estimate. (The instrument appears in Appendix C, p. A-29.)

Names of Students Receiving Attention

Since all pupils do not receive an equal amount of attention from teachers or paraprofessionals, their learning may be affected accordingly. Moreover, because the 1969-70 In-Depth Study showed that many paraprofessionals do not work with the entire class during reading and arithmetic lessons but are assigned to the same small group of pupils over a long period of time, IED wished to look separately at the test scores of those pupils who received special attention from the teacher or paraprofessional.

For this purpose, IED developed two forms so as to get independent estimates of which pupils were in fact receiving most attention. The first form asked the observer of a lesson to record the names of the pupils receiving attention from the adult under observation at that time (either teacher or paraprofessional). A form was completed for each observation of each adult during each monthly visit (five visits in reading and two in arithmetic) so as to get several samples of students receiving attention. (See Appendix C, p. A-30.) The second form was administered at the end of the year in experimental classrooms (those with paraprofessionals). Each teacher and each paraprofessional was asked to identify those pupils who had received attention from the paraprofessional during the course of the year and to estimate how many hours of direct help each of those pupils had received. (See Appendix C, p. A-31.)

The information on the two sets of forms--those administered during the observations and those administered at the end of the year--was combined to identify those pupils receiving an unusual amount of attention during the year.

Selection of Paraprofessional Information and Instruments

The 1969-70 In-Depth Study used an elaborate process, described in detail in the report of that study, to determine which aspects of a paraprofessional's background, work, training, and performance merited attention. Those aspects are discussed below. Where the description below is brief, the reader is referred to the 1969-70 *In-Depth Study* for a fuller treatment.

Background Information. When the *In-Depth Study* was being planned in 1969-70, a total of 35 background items (such as paraprofessionals' age, marital status, ethnic background, family status, income, job experience, and current work) were identified as worthy of attention. The justification for the choice of the 35 items appears in the report of that study. The instrument developed for measuring them, which had proven successful in its first use, was employed again during the current study. It appears in Appendix C, p. A-37.

Job Descriptions. Another instrument developed by IED during the 1969-70 *In-Depth Study* sought information on the training history, work setting, and usual daily duties of paraprofessionals. The justification for the items contained in that Job Description instrument appears in the report of that study. The use of the questionnaire during 1969-70 had demonstrated that the 175-item checklist of specific daily duties acted as an effective net in catching up much of what paraprofessionals did from day to day. Moreover, the instrument distinguished among paraprofessionals with different job titles. Consequently, IED selected that instrument for use during the current study. A copy appears in Appendix C, p. A-45.

Training. Considerable effort goes into training paraprofessionals in New York City. The 1969-70 *In-Depth Study* showed that 25 percent had received pre-service training and nearly 70 percent had received in-service training. In fact, most paraprofessionals had received over five weeks of part-time in-service training, and it was still going on.

It is clear that City school officials believe that paraprofessionals need training. But what is actually the relation between training and pupil achievement - if any? To answer that question, IED developed an elaborate training questionnaire for the current study. Items for the questionnaire came from two sources: 1) the *In-Depth Study*, and 2) the professional literature.

The *In-Depth Study* showed that paraprofessionals usually work directly with pupils rather than performing a "backstage" function. The report said the paraprofessional "...should be pictured as working alongside the teacher, sharing her job..." and concluded that "this has direct implications for any training program." From the findings of the *In-Depth Study*, a listing was made of the jobs most frequently performed by classroom paraprofessionals.

In a survey of paraprofessional training programs in seven states, Rittenhouse observed: "It is generally thought to be highly desirable that all aides who have instruction-related functions be given as much formal training as possible in child development, child psychology, and other education subjects...." Rittenhouse listed the topics usually covered in paraprofessional taining sessions and described the training methods commonly used. He concluded the study by recommending that both paraprofessionals and teachers be present at training sessions and that colleges provide for the aides to continue their education. Klopf, Bowman, and Joy of the Bank Street College of Education discussed the relationship of teachers and aides and, like Rittenhouse, suggested that teachers and aides should work as an instructional team in the classroom. Ferver and Cook of the University of Wisconsin considered both the roles of classroom paraprofessionals and the training methods which might be used with them. Carr, Hannah, and Paniagua of the New Careers Training Laboratory at New York University have written an extensive guide for trainers of auxiliary personnel. The guide suggests how to plan and lead training sessions and maps out both curriculum content and instructional techniques. From its review of the literature, IED developed a list of curriculum areas in which training is often conducted or is regarded as important.

Using the list of frequent duties taken from the In-Depth Study and the list of typical training topics taken from the literature review, IED identified a total of 19 possible training areas. The 19 areas were clustered into three sections: Orientation, Practices, and Principles.

Section One asked about orientation to job setting (both school and neighborhood), to duties expected, to ethical and legal considerations at work, to paraprofessional roles in the educational hierarchy, and to career opportunities. Presumably, such topics would be covered early in training.

Section Two asked whether training had covered such topics such as content of the school curriculum, instructional methods to be used with children, techniques of caring for children physically and emotionally, discipline procedures, classroom management (clerical tasks, housekeeping, record keeping, and monitoring students), and techniques for linking school and community.

Section Three asked whether training sessions covered principles of child growth and development (physical, emotional, and mental), principles of learning, principles of cultural, economic, and environmental influences on children, and principles of school and community relations.

Questionnaire items were created or eliminated where necessary so that each of the 19 categories would contain from 5 to 10 items. The 122 items that resulted were presented in scrambled order to ensure independent responses to each item. To make certain that an item had actually been included in formal training, respondents were asked to indicate whether they already knew it or had not been taught it or had been taught it during regular classroom work rather than in formal training. For those items that they had been taught in formal training sessions, respondents were asked to indicate whether the item had been emphasized or merely mentioned. Since veteran paraprofessionals may have been trained initially but not recently, respondents were asked whether their training took place in the current year or previously.

A special 15-item section at the beginning of the instrument asked who supplied the training, when and where sessions were scheduled, who attended, and what methods and media were used.

A pilot test of the questionnaire with 15 paraprofessionals in seven schools led to changes in the instructions and in the terminology for specific items. A copy of the completed instrument appears in Appendix C, p. A-63.

Principal's Paraprofessional Report. In the 1969-70 In-Depth Study, IED had asked the principals in 50 elementary schools to indicate the desirable characteristics of paraprofessionals and to rate the individual paraprofessionals then under study. As stated in the final report, principals named a series of personality characteristics--such as personableness, stability, interest, and ability to relate to other people--as being important. Teachers volunteered a quite similar list of paraprofessional characteristics when questioned independently.

Principals and teachers were also asked to choose the most valuable paraprofessional activities from a checklist. Principals and teachers chose four identical activities for top ranking: calming an emotional child, going over a paper with a child to point out his errors, preparing simple visual aids, and keeping records. Furthermore, their entire set of responses converged closely. In every case where they could choose between complex and simple classroom tasks, principals and teachers without exception chose the more complex paraprofessional task as being more valuable.

For the current study, IED developed a checklist addressed specifically to principals. It asked them to rate the paraprofessional on personal characteristics, on job performance, and on the impact of her work on pupils and teachers. A copy of the Principal's Paraprofessional Report form appears in Appendix C, p. A-84.

Selection of Teacher Characteristics and Instruments

Two teacher characteristics were assumed to be potential influences on pupil learning: level of education and years of experience. Although previous research shows mixed results for them, these two factors determine teacher salary levels and are significant at least in that respect.

Teachers' attitudes toward paraprofessionals also seemed worth inquiring about for two reasons: 1) They could influence paraprofessional success in helping children learn reading and arithmetic, and 2) they could signal an important difference among the sample classrooms if teachers with paraprofessionals were enthusiastic about them and teachers without paraprofessionals were opposed to their use. That is, pupils might have done better in experimental classrooms solely because of teacher enthusiasm for the paraprofessional services and not because of anything specific the paraprofessionals actually did. If IED could find an equally positive attitude toward paraprofessionals among teachers who did and did not have them, that possibility would be eliminated. Thus, teachers in comparison classrooms were specifically asked whether they would like a paraprofessional assigned to their classrooms for the next year.

IED developed a Teacher's Report to gather this information. It was pilot tested with six teachers, modified, and administered to all teachers in the sample following the final classroom observation in May.

Student Information and Instruments

Certain information about pupils was assumed to be related to their potential for learning: pre-test scores in reading and arithmetic, attendance pattern, and ethnic background. Previous research has demonstrated that these three factors can help predict performance in school. There is one additional factor that can be considered either a characteristic of the pupil or a characteristic of his teacher: the teacher's judgment of the student's potential for academic success in school. The rating may be interpreted either as a judgment of the pupil or as revealing something about the attitude of the teacher. Without deciding how it would be regarded, IED decided to collect it along with the pupil's ethnic background and attendance record by using the Teacher's Report appearing in Appendix C, p. A-31. Pupil pre-test scores were gathered on the Student Roster appearing in Appendix C, p. A-85. Inasmuch as the pupils' school location during the previous year (Grade 2) might help account for their performance during Grade 3, observers were asked to indicate on the Student Roster whether the student had attended the same school, a different school in New York City, a school not in New York City but in the United States, or a school in a foreign country. These data were to be matched with student test performance and attitudes to detect possible relations.

Other Auxiliary Personnel

When IED's observers made their initial round of visits to the 35 comparison classrooms which did not have paraprofessionals, they came back and reported that they had not found solitary teachers as expected. They had found instead that other adults--student teachers, "cluster" teachers, urban corps teachers, parent assistants, community volunteers, and other adults--were often found in the comparison classrooms. This meant that the potential power of the paraprofessional as a second adult would not be limited to experimental classrooms but would be available to some degree in comparison classrooms as well, thus reducing the differences between the two settings and perhaps masking paraprofessional effects.

To check on this important possibility, IED developed a special section of the Teacher's Report asking for a list of all adult aides, an indication of the amount of time they spent in the classroom, and a designation of those who assisted during reading or arithmetic instruction. In addition, teachers were asked to indicate whether a paraprofessional working primarily outside the classroom, such as a family assistant, was assisting a student or his family, since even that arrangement could have reduced the distinction between the comparison and control classes. (See Appendix C, p. A-33.)

Summary of Relations Between Variables and Instruments

The table at the beginning of this chapter will remind the reader of the relation between the variables selected for measurement and the instruments used for that purpose.

Chapter 5

DATA COLLECTION

This chapter deals with the selection and training of observers by IED and with the methods used by the observers to administer and collect the instruments discussed in Chapter 4. In general, observation and background information on each of the sample classrooms, as indicated in Chapter 3, was collected prior to the observer's first visit, during the monthly observations, and at the end of the series of observations. Scores from standardized reading and arithmetic tests were also collected for each pupil in the sample classrooms.

Selection and Training of Observers

The selection of classroom observers was made with the assistance of Dr. John Seiferth of Queens College, who had aided IED in its selection of interview teams for the In-Depth Study in 1969-70. With Dr. Seiferth's help, IED selected eight classroom observers. The educational backgrounds of these observers included public school teaching, private tutoring, supervision of service groups (e.g., Girl Scouts), social work, and membership on a local school board.

The observers were trained in a series of meetings, beginning with an orientation session on December 2, 1970. At this time the goals and procedures of the study were outlined and the role of an observer was discussed. Copies of IED's previous communications with the schools were also distributed and reviewed.

Training for the Amidon Expanded Category System--the teacher-pupil verbal interaction system chosen by IED to monitor the teacher and paraprofessional behaviors--took place on December 16 and 17, 1970. The training for the Amidon system was conducted by Mrs. Peggy Amidon, the author's wife, and by members of the IED staff. Each observer's classroom assignments were made at this time and instructions were given on arranging for the visit to each school.

A final training session on January 4, 1971, just prior to the first classroom visits, consisted of a review of the Amidon system and the distribution and explanation of other data collection materials to be used during classroom observations. A feedback session on January 20, 1971, allowed the observers and IED staff to discuss any problems or changes needed in observation procedures and materials. This session helped make IED staff members more aware of school procedures and also resulted in some minor changes in the data collection forms.

Administration of Data Collection Instruments

Teacher Information Forms

Following each school's acceptance into the sample, IED confirmed the agreement with memoranda to the principals and the teachers involved. Each teacher was asked to complete an information sheet asking for the times at which she taught reading or arithmetic each day, the curriculum materials used for each subject, and in what capacity the paraprofessional was employed during the reading and arithmetic lessons (e.g., large- or small-group instruction or individual help). The information on times at which reading and arithmetic were taught was used by the observers to schedule their monthly visits. The information on the curriculum materials was used to develop the Reading and Arithmetic Textbook Behaviors Checklists, and the information on how the paraprofessional was employed during reading and arithmetic lessons was used as a cross-check for other instruments designed to pick up similar information. Of the 98 classroom teachers represented in the study, a total of 95, or 97 percent, returned these preliminary information forms.

Classroom Observation Instruments

In December, 1970, each observer telephoned the classroom teachers assigned to her and arranged for the first observation, which was to take place in January, 1971. Subsequent visits were usually arranged at the time of the monthly observation (e.g., February appointments were made at the end of the January observation) or by telephone. Each appointment was confirmed by a telephone call from the observer either the day before or the morning of the scheduled visit. In some cases, because of good rapport, the observers were able to visit the classrooms with no more prior notice than a telephone call on the morning of the observation to confirm that the teacher and paraprofessional were both present and instructing that day.

Each classroom was visited once a month, from January through May. Five reading and two arithmetic observations were made during that period, using the observation instruments described in the preceding chapter and listed below, according to the procedures cited below. The average observation time for a classroom with a paraprofessional was 1 to 1½ hours, and the average observation time for a classroom without a paraprofessional was 45 minutes to 1 hour. The observers attempted to allow approximately one month between observations and to vary the day and time of each visit (e.g., Monday morning one month, Thursday afternoon the next month). In the classrooms with the paraprofessionals, the observers also tried to vary the order in which they observed the teachers and the paraprofessionals, beginning with the teacher one month and with the paraprofessional the next.

During each observation, the following instruments or forms were administered:

Amidon Expanded Category System
Media Checklist
Reading or Arithmetic Textbook Behaviors Checklist
Students Receiving Treatment
Instruction Time

During each observation, these instruments and forms were administered according to the following schedule:

Classrooms with Paraprofessionals	Classrooms without Paraprofessionals
200 Amidon tallies on Adult #1* (approximately 10 minutes)	200 Amidon tallies on teacher* (approximately 10 minutes)
Media Checklist on Adult #1 (2 minutes)	200 Amidon tallies on teacher
Media Checklist on Adult #2 (2 minutes)	Media Checklist on teacher (2 minutes)
200 Amidon tallies on Adult #1	Reading or Arithmetic Textbook Behaviors Checklist (3 to 6 minutes)
200 Amidon tallies on Adult #2	Complete forms "Instruction Time" and "Students Receiving Treatment" (10 minutes)
Media Checklist on Adult #1 (2 minutes)	
200 Amidon Tallies on Adult #2	

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*The Amidon Expanded Category System has a total of 30 categories of behavior for recording classroom verbal interaction. The system requires the observer to identify and record a behavior every three seconds. Using the schedule described above, a total of 400 "tallies" (or behaviors) is collected for each adult (teacher or paraprofessional) during the prescribed 20-minute observation period.

Classrooms with Paraprofessionals (cont'd.)

Media Checklist on Adult #2
(2 minutes)

Reading or Arithmetic Textbook
Behaviors Checklist for both
adults
(6-12 minutes)

Complete forms "Instruction
Time" and "Student Receiving
Treatment" for both teacher
and paraprofessional
(10-20 minutes)

At the end of each month, the observers returned to IED the completed observation materials for each classroom and obtained blank packets of materials for the following month's observations. The returned materials were checked for completeness and legibility, and any necessary corrections or additions were made by the observers before the data were recorded.

The five instruments listed above were used during each of the reading and arithmetic observations. (See the Table on pp 48-49 for the percent of return.)

Training of Paraprofessionals in the New York City Schools

Classroom observers administered this extensive questionnaire directly to paraprofessionals in their classrooms during interviews that lasted from 45 minutes to 1 hour. The observers were trained at IED in the specific procedures for ensuring effective administration. Of the 63 paraprofessionals represented in the study, 62, or 98 percent, of the paraprofessionals completed and returned the questionnaire to IED.

Background Information for Paraprofessionals in the New York City Schools
Job Descriptions for Paraprofessionals in the New York City Schools

During the first two monthly visits, IED observers distributed to each of the paraprofessionals in the study a copy of each of these two instruments. These questionnaires were completed by the paraprofessionals and returned to IED by mail in most instances. In several cases, however, IED staff members found it necessary to redistribute the questionnaires and also administer them directly to paraprofessionals in their schools. A total of 60, or 95 percent, of the possible 63 questionnaires of each type were successfully obtained by IED.

Principal's Paraprofessional Report

These forms were mailed to school principals directly following an explanatory telephone call by the IED staff. While most forms were returned to IED by mail, some necessitated visits to the principals by the IED staff. All 63 forms required for the participating paraprofessionals were completed and returned to IED.

Teacher's Report

Observers were asked to administer these forms to teachers in their sample classrooms during their final observation in May. In many cases, because of the teachers' time limitations, the observers found it necessary to leave the forms, asking the teachers to return them by mail to IED. In about one-half of the cases, the forms were returned with no follow-up required. For the remainder, telephone calls, letters, and visits by the staff were necessary to ensure adequate return of all forms. Of the 98 teachers participating in the study, 94, or 96 percent, returned a completed report.

Student Roster

A student roster for each of the sample classrooms was collected by the observers during one of the first two monthly observations. On this form, space was provided for the name of each pupil, a code number for each pupil, the school each pupil attended during 1969-70, and the name of each pupil's teacher during 1969-70. IED later used this information to gather pre-test and post-test reading and arithmetic scores from the Bureau of Testing at the Board of Education and from the schools directly. IED was successful in gathering student roster forms for all 98 classrooms in the study.

"Omnibus" and "Pictures" (Affective Inventories)
Metropolitan Arithmetic Test

Pupils in 97 of the 98 sample classrooms were given the two affective inventories "Omnibus" and "Pictures" and the arithmetic post-test, Metropolitan Arithmetic Test, Form G, Primary II Level, in early June. (One classroom was dropped from the final stages of the study because of a reassignment of pupils to other classrooms.)

Test administrators with education or teaching backgrounds were hired explicitly for this task and given an afternoon of orientation and training at IED.

Testing took place in the following order: administration of the arithmetic test (requiring 1 hour and 5 minutes) and two affective instruments (requiring 20 and 30 minutes each). With breaks for the children, however, and disciplinary problems within some classrooms, the actual time required for completing the instruments sometimes exceeded three hours. To establish comparable data from classroom to classroom, teachers were not given copies of the instruments ahead of time, and the teacher's role was minimized, as the test administrator was fully responsible for conducting the class during the testing period.

The administrators collected the instruments at the close of the testing period and returned them to IED, where they were scored.

Collection of Test Scores

The most difficult and complex data collection task in the study was the identification and recording of scores achieved by the participating students on previously administered standardized tests. As explained in the preceding chapter, "Instrument Selection and Development," three of the four tests chosen to measure student performance were those already administered in the New York City annual testing schedule.

Upon completion of a Student Roster Form for a sample classroom during the first or second monthly observation, IED's clerks began their search for test scores at the Bureau of Testing at the Board of Education. Since the pre-test reading and pre-test arithmetic tests were given in March, 1970 and January, 1971, respectively, IED was assured that results from both tests would be on hand at the Bureau of Testing in April, 1971, the date at which the recording of scores began.

Raw scores and grade equivalants for the two subtests used by the City in reading -- word knowledge and reading (comprehension) -- were collected for each child in the study. For the arithmetic test, similar scores were recorded for the three subtests: computation, concepts, and problem-solving.

After two weeks of recording scores at the Bureau of Testing, the clerks reported that, on the average, the test scores of approximately 30 percent of the pupils in a given classroom could not be located IED, discussing the problem with the Board of Education staff, agreed that a primary reason for this deficiency could have been a child's absence from school on the day the test was administered. Also, in tracing the second grade reading score, where the former teacher's name was necessary for identification of classroom records, the information obtained could have been inaccurate. In several cases, scores for total classrooms were missing at the Bureau.

IED could not risk possible bias in its test results from having scores for only 70 percent of the student sample. Therefore, it undertook a further search for scores at the school level. Letters were written to district superintendents and principals explaining the problem and asking for their cooperation in working with the IED staff members who would visit the schools to ascertain the scores from student record cards. It was soon learned that, in many instances, a score missing at the Bureau of Testing could be located at the school. Many students absent from school during the official administration of the test had been given make-up examinations by teachers, and results of these tests were recorded only on the student record cards. Visits to the school also permitted the staff to identify the correct second grade class for many students and thus acquire the reading scores.

In a few cases, second grade classrooms had been using special reading programs for which the Metropolitan Achievement Reading Test was not an appropriate measure of achievement and hence not administered. IED assumed the loss of these few classrooms for the analysis of reading achievement.

Since the post-test reading test was administered to students in April, 1971, the results were not expected at the Bureau of Testing until late May or early June. In returning to the Bureau at this time, the clerks found that only some of the classroom records had been filed. A call to the schools directly revealed that, in most instances, the scores were available. Hence, IED decided it more efficient to continue its visits to the schools to acquire this final set of test scores. Test administrators, already employed by IED to administer the attitude inventories and the post-test arithmetic examination in early June, played a significant role in acquiring the final test scores as they visited the schools.

As explained earlier, only one of the four tests required for measuring pupil achievement had to be administered by IED. This was the arithmetic sections of the Metropolitan Achievement Test, Form G, Primary II Level. The scores for this test were acquired easily in that all tests administered were scored at IED and results were readily available for analysis. (See Table on the following page for the percentages of return on all the tests.)

PERCENT OF RETURN FOR DATA COLLECTION INSTRUMENTS

DATA COLLECTION INSTRUMENTS	GROUP		
	ALL	EXPERIMENTAL	CONTROL
No. of Respondents	2821	1771	1050
Total	100.0%	100.0%	100.0%
Metropolitan Reading Test, Form B, Prim. I & Upp. Prim. (Pre-Test)			
Word Knowledge	68.7	65.2	74.7
Reading	68.6	65.1	74.4
Metropolitan Arithmetic Test Form F, Prim. II (Pre-Test)			
Computation	76.2	74.3	79.4
Concepts	76.2	74.4	79.1
Problem Solving	75.7	73.8	79.0
Metropolitan Reading Test, Form F, Elem. & Prim. II (Post-Test)			
Word Knowledge	64.1	60.4	70.3
Reading	63.9	60.2	70.1
Metropolitan Arithmetic Test, Form G, Prim. II (Post-Test)			
Computation	61.3	59.4	64.4
Concepts	61.1	59.4	64.0
Problem Solving	60.8	59.1	63.5
Omnibus (student attitude inventory)			
Self-Esteem	68.7	67.2	71.2
Attitude Toward Self	68.1	66.5	70.8
Pictures (student attitude inventory)			
Esthetics	70.5	68.7	73.6
Reading	80.6	68.8	73.7
Language Arts	70.5	68.7	73.7
Arithmetic	70.5	68.8	73.4
Science	70.6	68.8	73.6

PERCENT OF RETURN FOR DATA COLLECTION INSTRUMENTS (Cont'd)

DATA COLLECTION INSTRUMENTS	GROUP		
	ALL	EXPERIMENTAL	CONTROL
No. of Classes	98	63	35
Total	100.0%	100.0%	100.0%
Amidon Expanded Category System			
a. Reading	100.0	100.0	100.0
b. Arithmetic	99.0	98.4	97.1
Textbook Behaviors Checklists			
a. Reading	100.0	100.0	100.0
b. Arithmetic	95.9	96.8	94.3
Media Checklist			
a. Reading	100.0	100.0	100.0
b. Arithmetic	99.0	98.4	97.1
Instruction Time			
a. Reading	98.0	96.8	'100.0
b. Arithmetic	96.9	98.4	94.2
Students Receiving Attention			
a. Reading	n.a.	100.0	n.a.
b. Arithmetic	n.a.	68.3	n.a.
Background Information on Paraprofessionals in New York City Schools	n.a.	95.2	n.a.
Job Descriptions for Paraprofessionals in New York City Schools	n.a.	95.2	n.a.
Training of Paraprofessionals	n.a.	98.4	n.a.
Principal's Paraprofessional Report	n.a.	100.0	n.a.
Teacher's Report	95.9	95.2	97.1

CHAPTER 6

FINDINGS

Paraprofessionals improve student achievement in reading and in arithmetic. There is no doubt about this. They have a significant and substantial impact in both subjects. The evidence supporting this conclusion is ample. It is presented in question-and-answer form in this chapter.

However, before reporting the detailed findings, there are several key aspects of the study which must be explained. Most of these explanations appear in greater detail elsewhere, either in earlier chapters or in the Data Analysis Procedures in Appendix D, p. A-87. But for the reader who begins the book with this chapter and who may not wish to go further, they are worth stating here as well.

Special Considerations

The Meaning of "Improvement" in New York City Schools. It is essential to understand what "improvement" means in New York City schools for children who are the targets of the projects being evaluated in this study, projects supported by district decentralized ESEA Title I and the New York State Urban Education Programs. These are the children of poverty. They are predominantly Black and Puerto Rican. Their schools have been specifically singled out both by the federal government and the New York State government as needing extra funds to help these children overcome their disadvantages.

The test results for this study show that, on the average, these children go down in arithmetic between Grade 2 and Grade 3 when compared with national norms on the Metropolitan Achievement Test in arithmetic. To repeat, the average child in the ESEA Title I and New York State Urban Education Program projects included in this study does not improve in arithmetic when compared to national norms. Instead, he slips back. This finding applies both to children in classes with paraprofessionals and to children in classes without paraprofessionals.

"Improvement" in arithmetic means not slipping back as far as the other children. When IED reports that children in classes with paraprofessionals improved more than children in classes without paraprofessionals, it must be understood what this means: The first group does not slip back as far as the second group in arithmetic. This concept is essential in interpreting the results of this study for arithmetic.

In reading, the children in New York City schools do better than this between Grade 2 and Grade 3 when their scores are compared with national norms on the Metropolitan Achievement Test in reading. That is, rather than slipping back, they stay at about the national norm. Some slip back, but some move ahead, so that on the average they keep up with other children nationwide in reading between Grade 2 and Grade 3. However, it must be pointed out that these relatively favorable results in reading are based on the extremely limited data available to IED for reaching such a conclusion. The Metropolitan Achievement Tests that were used in most of the 98 classrooms included in this study in March of 1970 (Grade 2 for these children) and April of 1971 (Grade 3 for the same children), as explained in the Data Analysis Procedures, Appendix D, p. A-92, did not yield comparable results for those two points in time. Out of 2,000 pupils for whom two test scores were available, only 280 students had been tested with comparable levels of the Metropolitan Achievement Test in reading. Results for those 280 students show that they remained at the national norm in reading during that year. As explained in detail in the Data Analysis Procedures, IED resorted to the use of percentile gain scores to overcome the problem of incomparable test results. The consequence of that decision is that all the "improvement" reported throughout this chapter is a matter of *relative improvement* among the groups being compared. The results say nothing about how the various groups of students are performing on national norms.

While it is indeed heartening to find that paraprofessionals are decidedly helpful to disadvantaged children both in reading and in arithmetic, the paraprofessional projects as currently designed in New York City do not have sufficient power to help these children keep up with normal annual growth in arithmetic for the average child nationwide. In the case of reading, where these students tend to stay at the national norm between Grade 2 and Grade 3, children with paraprofessionals in their classes rise slightly above it.

The Comparability of Classes With and Without Paraprofessionals. As explained in Chapter 3, "Sample Selection," elementary school principals were asked to nominate sets of similar classes from each school, some classes *with* paraprofessionals and some *without*. For reasons given in that chapter, this procedure could not produce classes with exact matching characteristics. In general, classes *without* paraprofessionals had the better scores in April, 1970, on the Metropolitan Achievement Tests both in reading and in arithmetic than classes *with* paraprofessionals. The use of percentile gain scores was intended to adjust for the initial superiority of the classes *without* paraprofessionals, a superiority already well known to IED through informal knowledge gathered during the 1969-70 *In-Depth Study* and confirmed once again by elementary principals during the current study. The principals explained that they made it common practice to assign paraprofessionals to those classes in need of special help.

All of this is fully explained in Chapter 3, but a last reminder before presenting the findings of the study seems desirable.

A Massive Search for Significant Causes of Student Improvement. As explained at length and in considerable detail in Chapter 4, "Instrument Selection and Development,"IED conducted a broad-scale search for significant correlates of student improvement in reading and arithmetic during the conduct of this study. In addition to the Metropolitan Achievement Tests in reading and in arithmetic and the student attitude inventories, ten major instruments containing a total of several hundred items were administered to find which characteristics and behaviors of pupils and teachers and paraprofessionals were connected with the test results. The list of the major instruments is as follows:

INSTRUMENTS FOR DEPENDENT VARIABLES

Metropolitan Reading Test, Form B, Primary and Upper Primary I (Pre-Test)

Metropolitan Reading Test, Form F, Elementary and Primary II (Post-Test)

Metropolitan Arithmetic Test, Form F, Primary II (Pre-Test)

Metropolitan Arithmetic Test, Form G, Primary II (Post-Test)

Omnibus (student attitudes inventory)

Pictures (student attitudes inventory)

DEPENDENT VARIABLES

Amidon Expanded Category System -- 30 items

Reading Textbook Behaviors Checklist -- 16 items

Arithmetic Textbook Behaviors Checklist -- 13 items

Media Checklist -- 71 items

Instruction Time -- 3 items

Background Information on Paraprofessionals in New York City Schools -- 35 items

Job Descriptions for Paraprofessionals in New York City Schools -- 199 items

Training of Paraprofessionals -- 137 items

Principal's Paraprofessional Report -- 25 items

Teacher's Report -- 18 items

Student Roster -- 5 items

IED searched item by item through each of the instruments for measuring independent variables for discrete characteristics or behaviors that might be related to improvement in reading or arithmetic. Clusters of items were counted as well where that seemed an appropriate treatment of the data.

Only a handful of items out of the hundreds examined proved to be significantly related (the .01 level of confidence was used in most instances) to pupil achievement in reading and arithmetic. Thus, it seems important to call attention to the few variables that were identified as significant. They are presented in the detailed findings that follow.

Special Analysis of Test Results for Black Children. Since Black children constitute a plurality of the total sample (43 percent), the findings of the study for *all children combined* were in every case checked to see whether they were *equally true for Black children*. The test results for Black children proved to be almost always the same as for all children and all children in the hundreds of analyses that no further mention of Black children is made throughout this chapter except at those very few points where a difference occurred. But in closing this subject, IED wants to emphasize that its search for possible differences was elaborate and thorough. Silence on this topic in the chapter must be understood as a positive finding that Black children do not differ from other children in the results reported. (A separate analysis was not made for other population groups because of their relatively small size.)

Computing "Improvement" Scores for Individual Students and for Groups. The concept of "improvement" in reading and in arithmetic is central in this study. To help the reader understand how "improvement" scores for individual students and for groups of students were calculated, the following description is given. (A longer treatment of the topic appears in Appendix D, p. A-90.)

Improvement Scores For Individual Students

Reading. Improvement in reading means moving upward in percentile rank. That is, a child's improvement score is his post-test percentile minus his pre-test percentile. Percentiles were used for reasons given in Appendix D, p. A-90.

Arithmetic. Improvement in arithmetic means moving upward in percentile rank. That is, a child's improvement score is his post-test percentile minus his pre-test percentile. Percentiles were used for reasons given in Appendix D, p . A-91.

Improvement Scores for Groups of Students

Children. Each child was ranked by his improvement score for each of the two sub-tests in reading and each of the three sub-tests in arithmetic. A child was assigned to the Upper Group for a given sub-test if he was ranked in the top 25 percent; he was assigned to the Lower Group if he ranked in the bottom 25 per cent. Otherwise, he was assigned to the Middle Group.

When sub-tests data were combined to give a total reading improvement or a total arithmetic improvement score, the child was put in the Upper Group if he was in Upper on at least one sub-test and not in Lower on any other sub-test. Since there were three sub-tests in arithmetic, more than 25 percent of the children are in Upper and more than 25 percent are in Lower. For further detail on the method, see Appendix D, p. A-91.

Classes. In order to discuss the effect of teachers and paraprofessionals on pupil achievement, it was necessary to connect them with children whose improvement scores are in the Upper Group or with children whose improvement scores are in the Lower Group. The problem was, of course, that teachers and paraprofessionals have both kinds of children in their classes. Yet some way had to be found to designate an entire class as Upper, Middle, or Lower in reading (and separately in arithmetic) in order to contrast teachers and paraprofessionals associated with Upper Groups with those associated with Lower Groups. This was done by finding how many pupils in each class were in the Upper Group and how many were in the Lower Group. It was done separately for each of the sub-tests (two in reading and three in arithmetic). Any class having an extremely high proportion of pupils in either Upper or Lower (and hardly any in the opposite group) was assigned to that group for that sub-test. When reading sub-tests and arithmetic sub-tests were combined, any class in the Upper Group for one sub-test and in the Lower Group in any other sub-test was put in the Middle Group; otherwise, it was put in the Upper Group if it was Upper for at least one sub-test, or in the Lower Group if it was lower for at least one sub-test.

Attitude Scores. The data for the two "Omnibus" and five "Pictures" sub-tests were treated in exactly the same way as those in reading and arithmetic, except that there were no pre-tests. Thus, Upper, Middle, and Lower Groups were defined on quartiles of post-test performance. Each of the seven sub-test scores was analyzed separately, and no combination was attempted. For a further explanation, see Appendix D, p. A-91.

Comparing Groups of Children. All comparisons were made by taking the difference between the percentile improvement scores of two groups. Since one group may improve or both may improve or both may slip back, the differences between the two groups are not an absolute measure but a relative one measured in percentiles.

A 10-percentile difference is roughly equivalent to half a grade level. This conversion is an average, since the relation between grade level and percentile depends on the absolute score, the particular test, and the absolute improvement or loss.

Statistical Underpinning for Findings. The statements in the detailed findings that follow in question-and-answer format are based on an elaborate statistical analysis of dependent and independent variables using a variety of statistical techniques. Rather than providing a partial explanation of these techniques in the findings chapter and rather than providing the specific statistics underlying each statement, the data and the detailed explanation appear in the Appendix. Refer to Data Analysis Procedures in Appendix D, p. A-87.

Detailed Findings

The answers to the 11 major questions established for the study appear in the following pages.

Paraprofessionals Improve Reading

1. Does the use of paraprofessionals in 3rd grade classes improve reading?

Yes. The improvement is definite and substantial. Students in classes with paraprofessionals improve more than students in classes without paraprofessionals. Significantly, the students who improve most are those who are left with the teacher when a paraprofessional takes a group aside during the reading lesson. But even those who get direct help from the paraprofessional improve more than students in classes without paraprofessionals. Black children who have paraprofessionals in their classes improve somewhat more than other children in such classes. Moreover, those Black children who get direct help from paraprofessionals improve substantially more than other children who get such direct help.

Interpretation. The findings suggest that teachers are better than paraprofessionals at teaching reading. When freed of the especially difficult cases by assigning them to a paraprofessional, the teacher moves ahead with the remainder and the students improve. Those left with the paraprofessional do not improve as much. However, they improve more than students who have no paraprofessional help at all. In other words, supplying paraprofessional help is better than simply waiting for the teacher to get around to each of the reading groups into which she typically divides the class, but is not as good as placing a student in a group taught by the teacher herself when she has been freed of her most troublesome cases. It is well known that typical techniques of teaching reading do not reach disadvantaged students with severe reading problems. Evidently, what the paraprofessional does during reading lessons is somewhat more successful than what teachers without paraprofessionals are able to do.

The fact that Black children improve even more than other children as a result of having paraprofessionals in their classrooms is especially noteworthy because Black children constitute the largest single group in the sample (43 percent of the total). Furthermore, concern about the ethnic and racial backgrounds of paraprofessionals (57 percent of whom are Black) derives from the belief that they will be particularly effective in helping children of a matching background. Whether the paraprofessionals' backgrounds or other factors are the cause is uncertain, but it is clear that Blacks show a bit more improvement than other children as a result of having paraprofessionals in their classes. What is especially interesting is that the margin of superiority for Black children taught exclusively by teachers in experimental classes (children who have paraprofessionals in their classes but receive no direct paraprofessional help) is not as great for these children as for others. This means that Black children benefit a bit more by having direct help from paraprofessionals than other children. While the difference is not great, it is worth noting, since Black children are singled out for paraprofessional help less often than Puerto Rican children (in proportion to their numbers), as shown elsewhere. If Black children benefit most, it might be well to raise the priority for getting them paraprofessional help or at least to give them attention in proportion to their numbers.

Paraprofessionals Improve Arithmetic

> 2. Does the use of paraprofessionals in 3rd grade classes improve arithmetic achievement?

Yes. The improvement is clear, straight-forward, and significant. Students in classes with paraprofessionals improve more than students in classes without paraprofessionals. Significantly, the students who improve most are those taken aside and given direct help by the paraprofessional. However, even those who stay with the teacher during the arithmetic lesson improve more than students in classes without paraprofessionals. In short, being in a class with a paraprofessional, whether or not the student is given direct help, is better than being in a class without a paraprofessional.

Interpretation. On the surface, the findings suggest that paraprofessionals are better than teachers at teaching arithmetic. This is a reverse of the findings in reading, where teachers appear to be better than paraprofessionals. It is possible that what is required to teach arithmetic to these disadvantaged students is the kind of patient, repetitious, individual work for which paraprofessionals have far more time than teachers. It is particularly important to remember the large proportion of adult attention a pupil gets when a paraprofessional works with him. For example, when a paraprofessional works with four pupils, each one presumably can get as much as one-fourth of her time for his own individual problems. In contrast, when a teacher works with a group of twenty pupils, each one gets an average of one-twentieth of her time for his special problems. More instructional time has been shown in previous research to be related to learning.

The reversal of findings between reading and arithmetic can perhaps be explained by the amount of adult time the pupil is given. If teachers divide the class into sub-groups for teaching reading but keep them all together (except for those taken aside by the paraprofessional) during arithmetic, the superiority of the teacher in reading may be traceable to the fact that she works with small groups, like the paraprofessional, while in arithmetic she works with large groups. If that be the case, the only pupils who get small-group or individual instruction in arithmetic are those assigned to the paraprofessional. This could explain why teachers are less effective in arithmetic than in reading.

Whatever the explanation, it seems quite clear that being assigned to a paraprofessional during the arithmetic lesson is better than staying with the remainder of the class and is far better than being in a classroom where the teacher must teach all students without the help of a paraprofessional. For some reason the extra power of paraprofessional help for Black children is again evident in arithmetic, but is not quite as great in arithmetic as it is in reading. They benefit, but the special power of paraprofessional help for Blacks in particular is more evident in reading.

Paraprofessional Effects on Student Attitudes

3. Does the use of paraprofessionals in 3rd grade classes have an effect on student attitudes?

The answer is uncertain. When student attitudes toward themselves, toward school, and toward specific school subjects were measured at the end of the year, there was very little difference among students in classes with paraprofessionals, students who were given direct help by paraprofessionals, and students in classes without paraprofessionals. Although some of the differences were "statistically significant," they were too small to have much educational or practical significance. For example, most differences could have been caused by an average change of one answer on the attitude questionnaires.

Among the findings were these: Children in classes without paraprofessionals have more self-esteem than children in classes with paraprofessionals, although their attitudes toward school do not differ. Again, children in classes without paraprofessionals. express a stronger interest in science, while those in classes with paraprofessionals express a stronger interest in arithmetic and in language, two areas in which paraprofessionals work. However, the differences are so small as to be of negligible educational importance.

Interpretation. It is not possible to trace any of these results with certainty to the presence or absence of paraprofessionals. First, there is no pre-test score and thus no growth measure. (Administering a pre-test in the fall of 1970 was not feasible within the schedule of this study.) Second, all available evidence suggests that students in classes without paraprofessionals are not exactly comparable with students in classes that have paraprofessionals. Paraprofessionals are customarily assigned to classes most in need of help, as indicated elsewhere. It would be reasonable to expect that students' attitudes toward school would be somewhat worse in classes with paraprofessionals, at least at the beginning of the school year.

If it could be safely assumed that students in classes with paraprofessionals had a more negative attitude toward school, toward school subjects--and even toward themselves--at the beginning of the school year, then the findings could mean that paraprofessionals have had a strongly positive effect on student attitudes during the year. That is, the fact that students with and without paraprofessionals ended the year with almost identical attitudes toward school and toward school subjects would be a distinct achievement for paraprofessionals. This is a reasonable assumption, although it is not necessarily true. One piece of supporting evidence is the fact that even at the end of the year, students with paraprofessionals had lower self-esteem than students without paraprofessionals. In contrast, the attitudes of the two groups toward school and most school subjects did not differ. Perhaps working with paraprofessionals during the year changed student attitudes toward school but not their self-esteem, which is presumably much more difficult to change than attitudes toward school and school subjects. The final piece of evidence supporting this idea is the fact that in arithmetic--the subject in which direct help by paraprofessionals led to greatest improvement--the children who received this kind of direct help had significantly better attitudes than any other group.

Student Attitudes Are Related to Improvement

4. Are student attitudes in 3rd grade classes related to improvement in reading and arithmetic?

Yes. In reading, children with favorable attitudes toward school improve more in reading than children with unfavorable attitudes. In arithmetic, students with the poorest attitudes toward school (and toward science) make the greatest improvement. This pattern in arithmetic is even clearer and stronger for Black children. That is, Black children with poor attitudes toward school (and toward science) improve more in arithmetic than Black children who have good attitudes.

The apparent reversal of the findings in reading and arithmetic is understandable, as explained below.

Interpretation. The findings (which occur in reading only in classes with paraprofessionals) can be explained by understanding what kinds of children teachers assign to paraprofessionals and by taking into account the effect paraprofessionals have in improving the skills of students assigned to them. In reading, children with unfavorable attitudes are assigned to paraprofessionals who, as shown earlier, are not as effective in teaching reading as the teachers themselves. Thus, students with unfavorable attitudes do not improve as much in reading because they are taught partly by paraprofessionals rather than exclusively by teachers.

Where children with negative attitudes are assigned to paraprofessionals in arithmetic, the findings should be reversed because, as shown earlier, students who get direct paraprofessional help in arithmetic improve more than their classmates. That is, students with the poorest attitudes toward themselves and toward school improve most, thanks to paraprofessional help. Just as would be expected, in light of the fact that they benefit most from paraprofessional help, Black children with poor attitudes--the kind of children typically assigned to paraprofessionals--improve even more than Black children who have better attitudes.

Pupil Characteristics Make Little Difference

5. What kinds of students in 3rd grade classes improve most in reading and arithmetic?

Few characteristics matter. Boys improve in reading and arithmetic as much as girls. Pupils who are absent frequently improve as much as those who attend regularly. In fact, the effect of paraprofessionals is the same for boys as for girls and is the same for pupils who are often absent as for pupils who are usually present.

There are some differences. In reading, Black children in classes without paraprofessionals do not improve as much as other children, but in classes with paraprofessionals, Black children improve more than other children.

In arithmetic, Black pupils do not improve as much as other pupils except when they are given direct help by paraprofessionals.

Each pupil was rated by his teacher as high, medium, or low in potential for doing well in school. In reading, pupils rated high by their teachers improved most, those rated low did not improve as much, and those rated medium improved the least of all. In arithmetic, the pattern was different: Students rated low improved most, students rated medium did not improve as much, and students rated high improved least of all.

The findings are quite understandable, as explained below.

Interpretation. Although previous research shows that girls generally achieve better than boys in elementary school, a finding which usually holds true for disadvantaged populations as well as for others, that is not the case for the group studied here. The relative success of the boys cannot be attributed to paraprofessionals: Boys do as well as girls even in classes without paraprofessionals. Among the disadvantaged children examined in this study, even girls in the group perform at a very low level.

While it may seem surprising that attendance is not related to improvement, previous research shows the same result.

The finding that Black children do not do as well as other children unless they have paraprofessional help is, of course, an extremely important finding. The implications of these findings for the use of paraprofessionals with Black children may be quite helpful to educators.

The relation between the teachers' ratings of student potential and student improvement in reading and arithmetic can be explained in this way: Teachers usually assign low-potential students to paraprofessionals. In reading, the low-potential students get enough help to put them just ahead of the medium students who do not receive direct paraprofessional assistance. But the high-potential students who remain with the teacher improve even more. This is not surprising. In arithmetic, the low-potential students assigned to paraprofessionals improve considerably more than the middle and high students who remain with the teacher. Earlier, it was explained that students who stay with the teacher in arithmetic do not improve as much as students assigned to paraprofessionals.

Paraprofessional Characteristics Make Little Difference

> 6. What kinds of paraprofessionals are associated with the greatest student improvement in reading and arithmetic?

No characteristics matter. All kinds of paraprofessionals seem to be quite similar in their effect on all kinds of students both in reading and arithmetic. It does not matter whether paraprofessionals are young or old, Black, White, or Puerto Rican, whether they have several children or no children at all, whether their incomes are low or moderate (high-income persons are rarely employed as paraprofessionals), whether they have one or more dependents, whether they work 20 or 30 hours a week, how much experience they have had, whether or not they have had formal training, or how long they have lived in their present neighborhoods.

Interpretation. This finding confirms fully what teachers and principals said to IED during the 1969-70 In-Depth Study. As stated in the final report of that study, what teachers and principals selected rather than age, sex, education, ethnic background, and other such variables were personality characteristics. They said that the important thing about a paraprofessional was not whether she was young or old, Black or White, rich or poor, modestly educated or well-educated, but whether she was personable, able to relate to other people, stable, interested, knowledgeable, and intelligent--in that order.

Admittedly, the number of paraprofessionals included in this study is small: a total of 63. The minor differences that showed up might have proven "statistically significant" if they had been based on several hundred paraprofessionals. But small differences that register "statistical significance" merely because they are based on a large sample are usually without much practical significance. Moreover, the 273 teachers and principals interviewed during 1969-70 based their answers on working with several hundred paraprofessionals and they reached the same conclusion: The standard demographic measures such as age, level of education, and marital status have little or nothing to do with paraprofessional success.

There is little in the findings of the current study to contradict the opinions of teachers and principals about what is important in a paraprofessional (even though principals' ratings of paraprofessional traits do not prove significant, as reported later). As IED concluded in the In-Depth Study, a very wide band of the population seems capable of performing successfully as paraprofessionals.

Teacher Characteristics Make Little Difference

7. What kinds of teachers are associated with the greatest student improvement in reading and arithmetic?

Teacher characteristics do not matter. All kinds of teachers have about the same effect on all kinds of students both in reading and in arithmetic. It does not matter whether teachers are young or old, have baccalaureate or graduate degrees, are beginners or veterans, are just beginning in an urban school system or have taught in one for years, have never taught in Grades 1, 2, 4, 5, or 6, consider their paraprofessionals excellent or only fair, or want a paraprofessional assigned to them for next year. None of these characteristics were related to whether pupils improved in reading or in arithmetic. Of all the characteristics studied, only one showed up as significant: The fewer the number of years a teacher has spent teaching third grade, the better. But this does not mean that inexperienced teachers are better than experienced teachers, as explained below.

Interpretation. The fact that the ability to teach reading to disadvantaged third grade students is not related to such standard demographic measures as age, education, and experience is not particularly surprising. Previous research tends to confirm that general teacher characteristics do not seem to be directly linked to student learning. Presumably what it takes to reach children is a combination of personality factors and very specific teaching skills, none of which are measured by the general information IED gathered on teacher backgrounds. While personality characteristics of teachers were not examined at all in this study, IED did make intensive observations of specific teaching techniques and of how teachers talked to children during reading and arithmetic lessons. Those findings are reported later.

The explanation for the finding that the fewer years a teacher has spent in Grade Three, the better she will teach, is simply this: Principals customarily assign paraprofessionals to young teachers who have difficult classes. Those paraprofessionals, as shown earlier, have a positive effect on student learning in reading and in arithmetic. It is probably the presence of paraprofessionals in their rooms that gives young teachers a record of success in teaching reading and arithmetic.

Although only 98 teachers were included in the present study, the findings do fit in with previous research.

Formal Training of Paraprofessionals Makes Little Difference

8. Does the training of paraprofessionals for 3rd grade classes improve reading, arithmetic, or student attitudes?

Apparently not. Of 137 questions asked of paraprofessionals about when they were trained, how they were trained, and what they were taught, not one of the 137 showed up as being related to student achievement in reading or in arithmetic or to student attitudes toward themselves, toward the school, or toward specific school subjects such as reading and arithmetic.

It does not matter whether paraprofessionals have been instructed by auxiliary trainers or district trainers, whether their training has taken place inside or outside the school, during school hours or after school hours, weekly or monthly; it does not matter if sessions lasted less than an hour or an entire day; and it does not matter whether the classroom teacher was present in addition to the paraprofessional. Lectures are as effective as demonstrations or individual conferences. The use of films, video tapes, and field trips makes no difference. It does not matter what paraprofessionals were taught in any one of 19 different training areas. That is, it makes no difference whether they were taught ethical considerations on the job, career opportunities for themselves, the content of the school curriculum, teaching methods, disciplinary procedures, or techniques for linking school and community.

Interpretation. What IED measured was not the training given to paraprofessionals but, instead, what they could recall about it. That is, the information gathered on training was supplied by individual paraprofessionals themselves in answer to a long questionnaire containing 137 items dealing with the content and methods of training. To be credited with having actually received training, a paraprofessional had to recall that she had received it. To be scored as having covered a specific topic, such as proper forms of printing and handwriting for third grade children, she had to remember that it had been covered in one of her training sessions. It is, of course, quite possible that paraprofessionals forgot some or much of what they had been taught. IED assumed that what they could not remember would not influence their work in the classroom and thus could not be scored.

Moreover, paraprofessionals were credited with having been taught something only if they reported that it had been mentioned or emphasized in formal training sessions. That is, they were not credited with having been trained if they specifically said that they had not been taught a topic, or that they already knew it, or that it had been taught to them on the job in the classroom.

Over half of all paraprofessionals said that their training had mentioned or emphasized the following items (paraphrased from the questionnaire). The first four were checked most often:

1. Children should be praised when they learn something new, and the praise should be connected directly to what they have learned.

2. Demonstrations or illustrations can be used to make clear to pupils exactly what they are to learn.

3. Children need to figure out new situations on their own to be able to cope with them.

4. Teachers and principals like paraprofessionals who are interested, loyal, patient, prompt, and dependable.

5. A child should be praised or rewarded almost immediately for learning something new.

6. Children should be proud of and feel a sense of identity with their own ethnic and cultural groups.

7. Paraprofessionals should help children talk about problems that are bothering them at home or in school.

8. Children who have trouble understanding or doing assigned school work may feel discouraged and stop trying to learn.

9. Teachers have to allow for different learning rates of pupils when teaching new materials and must allow for pupils with individual learning problems.

10. Pupils should be given a variety of examples and illustrations when teaching or practicing a new concept or skill.

11. Students who are being taken outside the school on a field trip need to be supervised.

12. Careers are open to paraprofessionals through the Career Ladder Program and otherwise.

Even such apparently pivotal training topics as the above did not prove to be related to student improvement in reading or in arithmetic.

It is very difficult to believe that training does not matter, especially for paraprofessionals, given their limited educational background and limited experience in teaching. There are several possible explanations: 1) Paraprofessionals may not be able to remember what they have been taught, even though the training may affect their behavior; 2) all paraprofessionals may have received the minimum amount of training necessary for success, so that differences among them beyond that minimum are not important; 3) many paraprofessionals may have already acquired the basic skills of dealing with children before being trained, since most were mothers before taking the job; 4) IED may have asked the wrong questions about training, omitting certain items that are connected with student improvement in reading and arithmetic; 5) the amount of training given to paraprofessionals may be so limited in time and content that it cannot influence their success; or 6) the truly significant training paraprofessionals receive is what they get on the job under the direct supervision of the classroom teacher rather than anything they get in formal training sessions. The last explanation seems most reasonable. It became quite clear in the 1969-70 In-Depth Study that paraprofessionals see the classroom teacher as the primary source of daily assistance and guidance. Paraprofessionals do not rank their formal trainers nearly as high as their classroom teachers as a source of such help. In short, formal training may be adding little to the kind of intensive daily on-the-job supervision paraprofessionals inescapably get from their classroom teachers.

Some Specific Teacher Behaviors Make a Difference

9. What specific teacher behaviors in 3rd grade classes improve reading and arithmetic?

In reading, some teacher behaviors are better than others. It is better for teachers to acknowledge and recognize the ideas students express during reading lessons, better for them to help students clarify and sharpen those ideas,and better for them to summarize and consolidate student ideas. In short, it is clearly better for teachers to accept student ideas and to work them into the lesson than it is to ignore those ideas.

As to the specific techniques for teaching reading recommended by the teachers' manuals accompanying the basic reading and arithmetic textbooks widely used in the New York City schools, some are better than others. It is better for teachers to have children read silently rather than to have them read aloud or to read aloud to them, better for them to have pupils help one another, better to demand student answers containing conclusions or judgments rather than repeating facts, and better for them to help pupils figure out the meaning of new words for themselves.

In arithmetic, some teacher behaviors are also better than others. It is better for teachers to give orientation lectures explaining what the children will be learning and how it grows out of what they learned before. It is also better for teachers to give a clear *reason* for any criticism they make of student answers and ideas, and, conversely, it is *undesirable* for teachers to criticize student answers and ideas *without* giving a clear reason for the criticism. Students who receive individual help do not improve as much, but presumably this means only that teachers find it necessary to give individual help to low-performing students rather than that individual help is undesirable.

Interpretation. As explained earlier, IED selected the Amidon Expanded Category System as a classroom observation guide after a painstaking search of the literature and after getting advice from expert consultants. The Amidon observation guide is addressed to several of the teaching behaviors shown by earlier research to be related to pupil learning in such subjects as reading and arithmetic. The finding that teachers should accept student ideas and work with them into the lesson squares fully was one of the most clear-cut findings in previous research. Moreover, the use of silent reading, having pupils help one another, requiring students to reach conclusions or make judgments, and encouraging them to figure out the meaning of new words for themselves are widely recommended techniques in teaching reading. The teacher manuals examined by IED (those accompanying the reading textbooks most widely used in New York City elementary schools) listed a number of other teacher behaviors as being desirable, but none of these proved significant in the current study.

Some Specific Paraprofessional Behaviors Make a Difference

10. What specific paraprofessional behaviors in 3rd grade classes improve reading and arithmetic?

In reading, some paraprofessional behaviors are better than others. It is better for paraprofessionals to hold down the number of factual lectures they give children, to hold down the amount of time they spend talking to small groups of children, and to build up the amount of time they spend working with individual children.

In arithmetic, some paraprofessional behaviors are also better than others. It is better for paraprofessionals to limit the number of motivational lectures or "pep talks" they give during arithmetic lessons, better for them to give more orientation lectures in which they explain to the children what they will be learning and how it is connected to what they learned before, and better for them to let the students initiate talk rather than letting them speak only when the paraprofessional asks them a question.

It does not matter whether paraprofessionals teach reading or arithmetic as suggested by the teacher manuals. In reading, for example, it does not seem to matter whether the paraprofessional has the children read orally or silently, whether she defines words or has the children figure them out for themselves, or whether the children help one another. Similarly, in arithmetic it does not seem to matter whether the paraprofessional uses tangible objects such as pegs, rods, and abacuses; whether she explains new arithmetic terms before or after the children grasp the ideas they represent; or whether she incorporates historical information about arithmetic into the lesson.

Interpretation. As was the case with teachers, it is surprising that so few behaviors in the Amidon categories are related to paraprofessional influence on reading and arithmetic improvement. For example, one widely held purpose for employing paraprofessionals is to give children access to adults of similar ethnic or racial background who will have faith in the children's capacity to learn and who will give them steady encouragement. Yet the findings show that the amount of praise or criticism given by paraprofessionals does not affect student improvement in reading or arithmetic.

Perhaps the most important thing to understand is that there are many teaching behaviors in the Amidon instrument that paraprofessionals do not use at all. In reading, for example, two-thirds of what paraprofessionals do falls into only four of the 30 Amidon categories: factual lecture, factual question, factual response from students and silence. That is, what paraprofessionals do during a reading lesson is to state facts, ask children questions about those facts, and listen to their factual answers. In arithmetic, about the same thing happens except that there is a bit less talk,and paraprofessionals do almost all of this. Whereas they supply only 40 percent of the talk during reading lessons, leaving the remaining 60 percent to pupils, they talk 60 percent of the time in arithmetic, leaving only 40 percent to the pupils. In short, if paraprofessionals do not use many of the behaviors measured by the Amidon instrument, those behaviors cannot show up as significant influences on pupil learning. The same thing is true if all paraprofessionals behave the same way, as seems to be the case: If there are no differences among them, different behaviors cannot show up as significant.

Interestingly, paraprofessionals behave in almost exactly the same way as teachers, according to the Amidon measurements. That is, they spend most of their time giving facts, asking about facts, and listening to students repeat facts. IED concluded in the 1969-70 In-Depth Study that classroom paraprofessionals act as surrogate teachers rather than performing some kind of "backstage" or supportive function during reading and arithmetic lessons. The Amidon data for teachers and paraprofessionals confirm that earlier finding.

It is more difficult to understand why the specific techniques recommended by the teacher manuals that accompany the reading and arithmetic textbooks do not seem to be connected with student learning. Again, this may be because only a limited number of those behaviors are actually used by paraprofessionals. Or it may be because paraprofessionals differ so little from one another in the way they teach reading and arithmetic. Whatever the explanation, there is no evidence in these findings to support the use of any one technique over another, either in reading or in arithmetic.

Frequent Use of Several Types of Media Makes a Difference

11. Does the use of media in 3rd grade classes improve reading and arithmetic?

Yes. The frequent use of a variety of media helps students improve both in reading and in arithmetic. On the other hand, it does not matter which particular medium is used. Of the 71 different kinds of media examined, no single one made a difference in pupil improvement in reading or in arithmetic. What does make a difference is the frequent use of several different types of media.

Interpretation. There is a considerable body of earlier research findings leading to the conclusion that the use of a variety of teaching techniques, including the use of many different kinds of media, improves student learning. It is generally held that a teacher who has a large repertoire of techniques at her command will be better able to cope with all kinds of learning problems, that some ideas are better presented in some media than in others, that certain students learn better from certain media than from others, and that using a variety of techniques helps arouse interest and keep attention focused on the lesson. As in the case with the current findings, previous research on the use of media generally does not show that any particular kind of equipment or materials, whether it be auditory or visual or a combination, has any special instructional power.

Teachers and students in New York City use media with about equal frequency; paraprofessionals use media only about one-third as often as either teachers or students. Given the importance of making frequent use of a variety of media, paraprofessionals appear to be missing a good opportunity.

The importance of using media -- and some indication of their enormous unused potential -- can be drawn from the fact that third grade classrooms in New York City are still in a primitive technological state. This is shown by the fact that 60 percent of all media used by teachers, by paraprofessionals, and by pupils fell into only five out of 71 possible categories: the human voice, textbooks, blackboards, pencils, and work books. These have been the basic classroom tools for over a century. No other medium accounted for over 3 percent of the total. In hundreds of third grade classroom observations, there was not one single reported use of almanacs, catalogues, laboratory equipment, dioramas or sand trays, sculpture, mobiles, stabiles, language laboratories, radio, opaque projectors, slide projectors, silent movie projectors, film strips, micro projectors, television, sound movies, or projection screens of any kind. Dozens of other media were mentioned only a few times.

If a simple increase in the use of the voice, textbooks, blackboards, work books, and pencils can increase learning, it seems entirely reasonable to believe that an even greater use of other media could do the same thing -- perhaps more so. It certainly seems worth trying.

Chapter 7

RECOMMENDATIONS

Most aspects of the classroom paraprofessional program in the New York City elementary schools seem to be quite satisfactory and should be continued as they are. Accordingly, most of the recommendations offered below endorse what is being done and advise its continuation. The findings of this study single out a few areas where a modification of the program ought to produce even better results than are now being obtained.

Practices To Continue

1. Paraprofessionals should continue to be used in the New York City schools with all kinds of disadvantaged students, but especially with Black students.

2. Paraprofessionals should continue to be drawn from a wide range of the population. Personality characteristics such as the ability to relate to other people should be considered in selecting paraprofessionals, but age, level of education, marital status, ethnic background, and other such characteristics should not be considered.

3. Paraprofessionals should continue to teach arithmetic directly to students.

4. Paraprofessionals should continue to deal with individuals rather than with small groups, whenever possible. If assigned to a group of children, they should work with the children one by one rather than dealing with the entire group as though the children had a single problem and could be reached with a single teaching technique.

5. Paraprofessionals should continue to allow students to initiate discussions of arithmetic topics, rather than dominating the lesson with their own conversation.

6. Paraprofessionals should continue to avoid factual lectures in favor of other techniques when teaching reading.

7. Paraprofessionals should continue to limit the number of motivational lectures or "pep talks" when teaching arithmetic and should instead spend the time orienting students to what they will learn and showing its relationship to topics previously studied.

8. Classroom teachers should continue to make an active use of students' ideas, acknowledging those ideas, clarifying and reformulating them when necessary, and working them into basic reading and arithmetic instruction.

9. In teaching arithmetic, classroom teachers should continue to take the time to orient students to what they will be learning and show them how the new topics are connected to what they have already learned.

10. When classroom teachers criticize students' answers and ideas, they should continue to take special care to explain the basis for that criticism. That is, teacher criticism is desirable _only_ when accompanied by an explanation of exactly what the student has done wrong and how he could improve.

Practices to Modify

11. Paraprofessionals should be given thorough and specific training in how to teach reading to young children. The training should show paraprofessionals how to deal with individual children in a classroom setting rather than working with intact small groups of children.

12. Classroom teachers should be encouraged to subdivide the class during arithmetic lessons, using a pattern similar to what they typically use in teaching reading.

13. Classroom teachers and paraprofessionals in their classrooms should use a broad band of teaching techniques. No specific technique seems to be better than any other; using a variety is what is desirable.

14. Classroom teachers and paraprofessionals should make frequent use of a wide variety of media in teaching both reading and arithmetic. Pupils themselves should make frequent use of a wide variety of media in learning both reading and arithmetic. No particular medium is better than any other; what matters is frequent use and a substantial variety.

BOOK II

PARAPROFESSIONAL PERFORMANCE OUTSIDE THE CLASSROOM

CHAPTER 8

BACKGROUND INFORMATION

In addition to those paraprofessional aides who assist teachers in the classroom, auxiliary personnel are employed in the New York City schools to assist in areas outside the classroom. Educational assistants, for example, may serve as library aides or guidance aides, while a large number of school aides--technically not a paraprofessional title--perform monitoring tasks and assist in the lunchrooms. The largest group of non-classroom personnel is composed of parent/community paraprofessionals. These family assistants, family workers, and parent program assistants are expected to intervene directly in the homes of pupils who need help in school. Although higher pupil achievement and better pupil attitudes are the ultimate objectives of the paraprofessional program, non-classroom paraprofessionals get at those results indirectly--not necessarily less effectively--through improving the home life and school surroundings of the pupils. Thus, the non-classroom paraprofessional services presumably will have intermediate effects on home and school life but will not be immediately visible in changed pupil achievement and attitudes.

One of the goals of the paraprofessional program is the increased involvement of parents and other residents of inner-city neighborhoods in improving the teaching and learning process. The majority of parents surveyed for the 1969-70 In-Depth Study reported that they had begun to work differently with their children at home as a result of suggestions made by parent/community paraprofessionals. A sizable minority said that they had begun to take a more active part in school affairs since the initiation of the paraprofessional program. To a certain extent, then, the goal that parents would establish more effective linkages with the schools has been realized through the use of paraprofessionals to whom parents may be expected to relate more easily than to school personnel from a different ethnic and cultural background.

Parents were expected to profit directly from the assistance of paraprofessionals who counseled them as sub-professional social workers. The majority of parents participating in the 1969-70 study reported that they had received useful help from parent/community paraprofessionals. Assistance was most frequently provided in the areas of school, health, employment, finance, police and legal matters, and housing. Principals and teachers surveyed were in almost perfect agreement on the activities they valued most for parent/community paraprofessionals. Their main concern was to have paraprofessionals help families with school problems and problems of health and finance. The one activity they ranked highest for parent/community paraprofessionals was "hearing complaints from parents." This kind of assistance no doubt contributed to the enthusiasm expressed by principals and teachers for paraprofessional services, and it may help to explain the overall opinion voiced in last year's study that schools were doing a better job as a result of the paraprofessional program.

While the majority of parent/community paraprofessionals spend most of their time working directly with families, the 1969-70 study revealed that many family assistants and family workers spend a portion of their time in classrooms working with pupils. More overlap was found in the activities of classroom and parent/community paraprofessionals than was called for in the Board of Education's job specifications. Although either kind of paraprofessional may perform tasks normally expected of the other, parent/community paraprofessionals showed a much greater tendency to enter the territory of classroom paraprofessionals, indicating that the roles of parent/community paraprofessionals may not have been clearly conceived or that they have not been adequately trained or supervised.

Among the parent/community paraprofessionals, the family assistant's role was found to be the most clearly defined, while the family worker's responsibilities were relatively unclear. That is, the types of tasks assigned to family workers did not provide any clear direction for their work.

Considering the social worker role attributed to parent/community paraprofessionals in the 1969-70 study, IED has not attempted to evaluate their performance in terms of pupil gain. Helping families solve problems cannot be expected to have an immediate effect on pupil achievement. In view of this, IED has directed its efforts toward defining more precisely the background and job characteristics of parent/community paraprofessionals, while collecting similar data on other groups of non-classroom aides, such as educational assistants working in school libraries. In addition to supplementing the findings of the 1969-70 study in the area of paraprofessional job descriptions, IED has sought responses from supervisors to verify the kinds of activities reported by the paraprofessionals, from trainers to ascertain whether training is appropriate to actual job responsibilities, and from project directors to assess these activities in terms of specific project objectives.

Chapter 9

SAMPLE SELECTION

Procedures used to select non-classroom paraprofessionals, their immediate supervisors, their trainers, and their project directors are described in this chapter. Project directors were the primary source used to identify non-classroom paraprofessionals in district decentralized ESEA Title I and New York State Urban Education projects. Questionnaires sent to and completed by the paraprofessionals so identified listed supervisors and trainers, who later participated in the study, providing information on paraprofessional job performance and training experience.

Identification of Project Directors

IED's first task was to identify the directors of projects included in Group H of the ESEA Title I and Group 8 of the New York State Urban Education programs. The 29 projects listed in Group H and the 14 projects listed in Group 8 are those whose focus is the preparation and use of paraprofessionals in the school and community. The 43 projects involved both classroom and non-classroom paraprofessionals. (See Appendix A, p. A-2.)

IED contacted school district offices to locate individual project directors. (In many cases, the project directors were the district coordinators for ESEA Title I and New York State Urban Education programs.) Twenty-nine directors were identified for the 43 projects.

Identification of Non-Classroom Paraprofessionals

Telephone conversations held with most of the directors and their assistants provided IED with initial ideas on the focus of individual projects, the number and kinds of paraprofessionals employed, and the job specifications and work locations of the paraprofessionals. With this input, IED began to compile a listing of projects that included non-classroom paraprofessionals. At the same time, proposals for each of the 43 projects were examined at IED. This review provided additional information on the focus of each project and the types of paraprofessionals employed.

To provide more concrete descriptive data on the 43 individual projects and to confirm information gathered to date, each of the project directors was sent a questionnaire requesting the following information on the paraprofessionals employed: the paraprofessional's name, job title, school, grade level, work location (e.g., office, library, family/community center), number of working hours per week, and areas of training (e.g., guidance and discipline, child growth and development). (See Appendix G, p. A-169.)

Questionnaires for each of the 43 projects were completed and returned to IED. On the basis of project descriptions, job titles, and locations of work provided by the directors in the initial telephone conversations and the returned questionnaires, IED identified 31 of the 43 projects as involving one or more non-classroom paraprofessionals. These projects were coordinated by 22 of the 29 original project directors. (See Appendix A, p. A-2, or the 31 starred projects.)

A list of non-classroom paraprofessionals was compiled by IED, including all paraprofessionals classified as family assistants, family workers, auxiliary trainers, and parent program assistants in the 31 projects. In many instances, information over and above paraprofessional job title was reviewed. For example, location of work was considered to determine whether a paraprofessional was non-classroom-oriented. As a result, many educational assistants and a few teacher aides were added to the list because of their work in the school library or in other locations outside the classroom. Directors also listed some school aides as performing non-classroom tasks in the Group H and Group 8 projects. These, too, were added to the master list.

Altogether, 325 non-classroom paraprofessionals from 15 school districts were identified in the 31 projects. The nature of the proposed data collection process, a personal interview, forced IED to select a sample of the 325 non-classroom paraprofessionals for the study. Since parent program assistants, family workers, auxiliary trainers, and teacher aides comprised a very small proportion of the total population (fewer than 30 in each category), all paraprofessionals identified in these roles were included in the sample to ensure adequate representation. Approximately one-third of the family assistants, one-half of the educational assistants (identified as working in the library), and two-thirds of the school aides were selected for the sample. A total of 169 paraprofessionals, having seven different job titles, were included in the final sample. The chart on the following page describes the distribution of the total population, the selected sample, and the completed interviews across the seven possible non-classroom job titles.

TYPE OF PARAPROFESSIONAL	NUMBER OF PARAPROFESSIONALS		
	Total population	Selected sample	Completed interviews
Family assistant	163	50	43
Educational assistant (working in library)	64	34	30
School aide	38	25	21
Parent program assistant	26	26	22
Family worker	16	16	15
Auxiliary trainer	14	14	11
Teacher aide	4	4	4
Total	325	169	146

Identification of Immediate Supervisors and Trainers

The paraprofessionals themselves were the source for identifying immediate supervisors and trainers. A Paraprofessional Information Form was sent to each non-classroom paraprofessional to determine the names and locations of their immediate supervisors and trainers. (See Appendix G, p. A-167.) Ninety-five percent of the paraprofessionals returning the form listed an immediate supervisor, while only 40 percent were able to give the names of their trainers for the past year. (For the purposes of this study, IED decided that only trainers who were part of a formal training program, i.e., one that took place in addition to the everyday supervision a paraprofessional may get in her school, would qualify for the sample selection of trainers.) A master list of supervisors and trainers, which included locations of work, was compiled by IED for further data collection.

Chapter 10

INSTRUMENT SELECTION AND DEVELOPMENT

To gather information on the background characteristics and job activities of non-classroom paraprofessionals, a revised and expanded version of two previously developed questionnaires, entitled "Background Information on Paraprofessionals in the New York City Schools" and "Job Descriptions for Paraprofessionals in the New York City Schools," was administered to all paraprofessionals selected for the study. The portion of the expanded questionnaire on job descriptions, which listed 207 specific activities that a paraprofessional might perform, was distributed to project directors, immediate supervisors, and trainers of the selected sample of paraprofessionals. These respondents reviewed the checklist in terms of the activities expected of paraprofessionals, the activities they actually performed, and the activities for which training was provided.

Background Information and Job Descriptions for Paraprofessionals in the New York City Schools

This instrument represents the revised and expanded version of the above-mentioned questionnaires, which had been used in IED's 1969-70 In-Depth Study. In contrast to last year's study, which focused on both classroom and non-classroom paraprofessionals, the second phase of the current study included only non-classroom paraprofessionals -- those serving as auxiliary trainers, parent program assistants, educational assistants and teacher aides (who worked primarily in the library), family assistants, family workers, and school aides.* For this reason, certain questions -- specifically those relating to job activities -- required revision and expansion. (See Appendix G, p. A-172, for a copy of the revised questionnaire.)

Part 1: Background Information on Paraprofessionals

Part 1 sought information applicable to a number of key variables singled out repeatedly in the literature as being associated with successful programs: ethnic background of the paraprofessional, income, education, number of children, links with the community, and previous job experience. The paraprofessional literature shows that in addition to these variables, age, sex, marital status, and residence in the school district in which a paraprofessional works are additional factors to consider when hiring paraprofessionals. Questions on the paraprofessionals' place of birth and childhood residence were added by IED to measure the degree to which newcomers are assimilated and employed in the New York City schools. These questions were selected from the questionnaire entitled "Background Information on Paraprofessionals in the New York City Schools" developed during the 1969-70 In-Depth Study. (A complete account of the development of the original questionnaire can be found in Chapter 3 of the In-Depth Study.)

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*School aides are not typically categorized by the Board of Education as paraprofessionals. Supported by City tax-levy funds, they are usually assigned such routine tasks in the schools as monitoring hallways and assisting in the lunchrooms. Nevertheless, project directors listed school aides when they were asked to identify non-classroom paraprofessionals working in the sample projects of this study. The inclusion of school aides in the study was confirmed in discussions with the New York State Education Department, since it was reported that ESEA Title I funds had supplemented City tax-levy funds in certain projects.

Part 2: Job Descriptions for Paraprofessionals

Part 2 gathered information on paraprofessional job experience, training, and daily activities. The first section of Part 2 dealt with previous experience in the paraprofessional program, present work schedule and job setting, supervision received, subjects and grade levels handled, and languages used on the job. IED also included questions seeking information on the ethnic backgrounds of those served by the paraprofessional. This last variable has been described in the literature as an important consideration in developing successful paraprofessional programs, since paraprofessionals whose ethnic backgrounds match those of their targets can enhance communication and at the same time serve as models of success. Questions for this section were selected from "Job Descriptions for Paraprofessionals in the New York City Schools," which also had been used in the 1969-70 In-Depth Study.

The second section collected information on paraprofessional training programs. Questions covering the type of training, the schedule and setting of the training program, and the academic courses taken by the paraprofessional during the current year were selected from the In-Depth Study. Since the literature reviewed for the 1969-70 study yielded very little information on paraprofessional training, most of the questions in this area were developed by the IED staff.

This year, IED expanded these questions to develop an entire questionnaire on training for the classroom phase of the current study. More detailed questions were added to reflect the frequency and duration of training programs and to identify the participants in the programs. (See Appendix C, p. A-63.) Several items from this questionnaire were selected for inclusion on the form administered to non-classroom paraprofessionals. These included inquiries on the specific content of the training sessions and the various media and activities used for instruction.

The paraprofessional's neighborhood was the focus of the third section of Part 2. Questions were designed to ascertain the paraprofessional's informal contact with the community around the school when not on the job. Items on the length of time in the neighborhood, church associations, and the number of people met informally in the neighborhood were included. These questions had originally been developed by the IED staff for the In-Depth Study.

The final section of the second part of "Background Characteristics and Job Descriptions for Paraprofessionals" was a checklist of paraprofessional job activities. Because of the focus on non-classroom paraprofessionals, only about half of the 207 activities listed in the current questionnaire were selected from the checklist used in last year's study. Many new items were generated by the staff to accommodate the special jobs of the non-classroom paraprofessionals.

In developing the checklist items for the 1969-70 study, IED had searched the literature for possible items and categories of items. Several investigators displayed a number of different lists of activities that had been assigned to paraprofessionals. Instructional, clerical, and tutorial activities comprised a large proportion of the items on these lists. The paraprofessional job specifications of the New York City Board of Education were also helpful in providing items for the checklist.

Over 100 items were selected for the list. Because of lack of appropriate studies, IED developed its own system for clustering and categorizing the items. A division was made between activities expected of classroom paraprofessionals (for example, educational assistants and teacher aides) and those expected of parent/community paraprofessionals (for example, family assistants and parent program assistants). The 18 categories developed were:

Classroom Paraprofessionals	Parent/Community Paraprofessionals
Planning	Collecting information
Preparing/concluding	Recording information
Presenting information to instruct	Giving information
Assigning	Matching family needs to outside resources

Conducting recitation

Testing and evaluating

Reporting information

Keeping records

Supervising

Disciplining

Physical caring

Comforting

Instructing family in how to duplicate outside resources at home

Formal socializing

Items previously collected were revised and categorized, and new items were added to ensure adequate representation in each category. In this way, a total of 175 items was selected for the 1969-70 study.

Using the tabulation of data from last year's report, the five items most frequently checked in each of the 18 categories by family assistants and family workers (roles with a similar intent) were identified by adding the number of family assistants who checked each item to the number of family workers who checked the same item and then selecting the five items with the highest totals. The same procedure was used to identify the single items most frequently checked in each category by auxiliary trainers and parent program assistants.

To determine five most frequently chosen items overall in each category, four of the five items most commonly selected in each category by family assistants and family workers (step 1) and the single items most often checked by auxiliary trainers and parent program assistants (step 2) were used. When there was an overlap, with the most commonly chosen item among auxiliary trainers and parent program assistants also being one of the four most commonly chosen items among family assistants and family workers, the item fifth in frequency among the family assistants and family workers was added to the list, with the result that each category was represented by a total of five items, for a total of 90 items. (The greater weight given to family assistants' and family workers' choices, compared with those selected by auxiliary trainers and parent program assistants -- four to one -- was based on the proportionate representation of these paraprofessionals in the 1969-70 study. (Family assistants and family workers constituted nearly 18 percent of the total respondents, while auxiliary trainers and parent program assistants made up about 5 percent.)

To supplement these 90 items and to develop a further list of activities for non-classroom roles not adequately represented in the previous study, IED conducted a series of interviews with small groups of parent program assistants, educational assistants, auxiliary trainers, school aides, and family assistants. (Family workers and teacher aides, numbering only 15 and 4 respectively in the current survey, were not interviewed, since it was determined that activities supplied by family assistants and educational assistants would cover their roles as well.)

Each interview consisted of three steps: The paraprofessionals discussed and described the roles they performed during a typical day of work, guided by specific questions from the interviewer; the paraprofessionals responded to and elaborated upon specific job descriptions extracted from project proposals and from Board of Education paraprofessional job specifications; and the paraprofessionals reviewed the checklist of 175 items from the 1969-70 study, identifying key activities and suggesting modifications that would more accurately reflect the kinds of tasks they were likely to perform. This interview technique was effective in eliciting responses from the paraprofessionals on which a more complete list of non-classroom job descriptions could be based.

As a result of these meetings, 61 new items were developed for the checklist, including such activities as "Serving as an interpreter between the principal, guidance counselor, or other member of the school staff and non-English-speaking parents during personal interviews and telephone conversations" and "Demonstrating to students the proper way to locate and replace books on library shelves." Forty additional items from the previous checklist were modified for the current study -- for example, "Accompanying students on field trips" was changed to read "Planning a field trip or visit for paraprofessionals in your district," and "Assigning library jobs or responsibilities to students, such as shelving books, collecting overdue fines, and organizing the card file" was substituted for "Assigning classroom jobs or responsibilities to students, such as erasing the blackboard or closing the windows, etc."

In addition, the paraprofessionals emphasized 16 items from the previous checklist of 175 items that were not already included. Because of their popularity among the sample interviewed, IED included these in the current checklist, bringing the total of items to 207.

Paraprofessional Job Activities as Viewed by Project Directors
Paraprofessional Job Activities as Viewed by Immediate Supervisors
Training of Paraprofessionals

These three data collection instruments resemble the job activities section of the paraprofessional questionnaire described above in that they contain the same list of 207 items. The only difference is the manner in which each respondent is asked to review the job activities. Project directors, supervisors, and trainers were asked:

Project director:	"How often do you expect these paraprofessionals to perform the following activities?"
Supervisor:	"How often does the paraprofessional you supervise perform these activities?"
Trainer:	"How often do you train these paraprofessionals in the following activities?"

For each activity, the respondent answered Never, Once in a While, Fairly Often, or Very Often. In each case, the respondent was provided with the names and job titles of the paraprofessionals for whom he was to respond.

The job activities checked by the paraprofessional were to be compared with those checked by the project director to determine whether the kinds of tasks being performed conformed to the intentions and expectations of the project director.

The job activities checked by a paraprofessional were to be compared with the job activities checked by his immediate supervisor to determine the extent of agreement between what the paraprofessional reports that he does and what his supervisor reports about him. The intention was to use the supervisor's report to confirm what the paraprofessional reported about his own work.

The job activities checked by the paraprofessional were also to be compared with those checked by his trainer to determine whether the specific activities for which he had received training were those in which he actually was engaged.

Chapter 11

DATA COLLECTION

In this chapter, the gathering of information from non-classroom paraprofessionals, their project director, their immediate supervisors, and their trainers is detailed. Interviewers, selected and trained by IED, administered the project director and paraprofessional questionnaires, while the supervisor and trainer questionnaires were distributed and returned by mail. Selection of the individuals who were studied is described in Chapter 9, and development of the instruments in Chapter 10.

Selection and Training of Interviewers

Interviews with 22 district project directors were conducted by research assistants of the IED staff. IED provided a brief orientation to the specific projects and types of paraprofessionals to be discussed.

A team of six interviewers, selected and trained by the IED staff, conducted interviews with the proposed sample of 169 non-classroom paraprofessionals. A half day of training was provided to review the paraprofessional questionnaire "Background Information and Job Descriptions for Paraprofessionals in the New York City Schools." Methods and techniques for administering this questionnaire to the paraprofessionals during school time were also covered.

Appointments with the paraprofessionals were made by the IED staff approximately one week in advance of the interview. Every attempt was made to schedule all the paraprofessionals selected at a given school for a single meeting. Appointments were then confirmed one day in advance. All interviews were completed during the last two weeks in May.

Distribution and Return of Questionnaires

Project Director Information Form

Once IED had identified the 29 directors of the 43 ESEA Title I and New York State Urban Education paraprofessional projects, information forms were mailed requesting data on the specific projects and the paraprofessionals employed. This information was used to identify the non-classroom paraprofessionals across the 43 projects. The Project Director Information Form was completed and returned by all 29 directors.

Paraprofessional Information Form

Altogether, 325 paraprofessionals in the 43 projects were identified as non-classroom paraprofessionals. Each of these paraprofessionals received by mail an information form requesting the names and locations of their immediate supervisors and district-wide trainers, thereby providing a mailing list for further data collection. Of the paraprofessionals, 292, or 90 percent, returned the questionnaires completed to IED. At least two attempts were made to remind paraprofessionals to complete and return these forms, in order to ensure a substantial return rate.

Background Information and Job Descriptions for Paraprofessionals in the New York City Schools

Of the total population of 325 non-classroom paraprofessionals, 169 non-classroom paraprofessionals in 13 districts were selected for participation in the study. Meetings were scheduled at 73 sites, where small groups of paraprofessionals met with IED interviewers for 45 minutes to 1 hour. The chart below describes the number of interviews conducted according to location and district.

INTERVIEWS OF NON-CLASSROOM PARAPROFESSIONALS BY DISTRICT AND SCHOOL

DISTRICT	INTERVIEWS CONDUCTED AT:			TOTAL
	District office	Elementary school	Junior high or intermediate school	
1	1			1
2	1	2	1	4
4		15	4	19
5		6	1	7
9	1	2		3
15	1	5		6
17		3	2	5
18		1		1
19		7	2	9
27		7		7
28		2		2
29		1		1
30		8		8
Total	4	59	10	73

In some cases, although appointments had been made and confirmed with paraprofessionals, questionnaires were left with school officials for completion by absent paraprofessionals. Vigorous follow-up was conducted by IED to collect these forms.

Questionnaires were completed by 146 paraprofessionals, or 86 percent of the total population sampled. The chart below describes the types of non-classroom paraprofessionals from each of the 13 participating school districts who returned the questionnaire.

NUMBER AND TYPE OF PARAPROFESSIONALS
PARTICIPATING IN THE STUDY
BY DISTRICT

Title	District													Total
	1	2	4	5	9	15	17	18	19	27	28	29	30	
Auxiliary trainer	2	2		6								1		11
Educational assistant		2	17						9	2				30
Parent program assistant			18					1		3				22
Family assistant		2			9		12		13	6	1			43
Family worker		3	4			4			4					15
School aide							4	2					15	21
Teacher aide										4				4
Total	2	9	39	6	9	4	16	3	26	15	1	1	15	146

Job Descriptions for Paraprofessionals as Viewed by Project Directors

As discussed on p. 84, 31 projects were identified as including one or more non-classroom paraprofessionals. Only 30 were included in the evaluation because of the late assignment of one project to IED. The 22 directors coordinating these projects were interviewed and completed job description questionnaires for each type of non-classroom paraprofessional employed in their projects. Two different types were involved in three of the projects, so that a total of 33 job description questionnaires were collected from the directors of the 30 projects.

Job Descriptions for Paraprofessionals as Viewed by Supervisors

An immediate supervisor was identified for each of the 169 paraprofessionals selected for the study. This was accomplished by reviewing the paraprofessional information forms returned and by asking paraprofessionals directly at the time questionnaires were administered. As the paraprofessional interviewers gathered their forms at IED on the morning of a scheduled meeting, they were asked to deliver a questionnaire to the immediate supervisors of these paraprofessionals. In the majority of cases, supervisors' names had already been identified by the IED staff but, in a few instances, supervisors needed to be located by the interviewers while at the school. Supervisor forms were returned to IED by mail, except for a few. In these exceptional cases, the interviewer successfully encouraged the supervisors to complete the forms while he was conducting interviews with the paraprofessionals. In nearly every instance, supervisors were based at the same site as paraprofessionals. Of the 169 supervisor forms requested, 122, or 72 percent, were returned completed to IED.

Training Program Descriptions

Of the 169 non-classroom paraprofessionals selected for the study, 75 reported the name of a trainer they had worked with during the current school year in a planned, district-wide training program (i.e., excluding on-the-job daily supervision or guidance by an immediate supervisor or assistant principal). Since those in any given district who listed a trainer tended to name the same individual, the total number of trainers identified was 14. Telephone conversations were held with each trainer by the IED staff before questionnaires were mailed. The purpose of these initial calls was twofold: to describe the intent of the forms and to determine whether the trainer differentiated his training program for different types of paraprofessionals (i.e., family assistant as contrasted with parent program assistant). If he did make such a distinction, the trainer was sent duplicate forms so that responses could be recorded for the different training programs. For example, in one district, both educational assistants (who work in the library) and family assistants listed the same trainer. In this case, the trainer confirmed that he conducted separate training sessions for each type of paraprofessional and, consequently, completed two questionnaires. Of the total of 17 questionnaires sought, 16 were returned to IED. These described the training programs for 69 of the 75 paraprofessionals who had originally listed a trainer.

* * *

The chart on the following page provides a comprehensive view of the number and types of respondents (paraprofessionals, project directors, supervisors, and trainers) who were identified for participation in the study and who ultimately contributed information for data analysis.

NUMBER AND TYPE OF RESPONDENTS
BY DISTRICT

		District													Total
		1	2	4	5	9	15	17	18	19	27	28	29	30	
Paraprofessionals	Number of non-classroom paraprofessionals identified	2	18	45	8	64	7	37	16	82	22	4	1	19	325
	Number of non-classroom paraprofessionals selected	2	10	42	8	11	7	17	3	28	17	4	1	19	169
	Number of non-classroom paraprofessionals participating	2	9	39	6	9	4	16	3	26	15	1	1	15	146
Project directors	Number of project directors identified	1	3	1	2	3	2	2	1	3	1	1	1	1	22
	Number of project directors participating	1	3	1	2	3	2	2	1	3	1	1	1	1	22
Supervisors	Number of paraprofessionals identifying an immediate supervisor	2	10	42	8	11	7	17	3	28	17	4	1	19	169
	Number of paraprofessionals reported on by immediate supervisors	1	9	33	5	9	3	13	1	25	11	0	1	11	122
Trainers	Number of paraprofessionals identifying a trainer	2	2	33	2	1	4	12	0	7	10	0	1	1	75
	Number of paraprofessionals reported on by a trainer	0	2	33	1	1	4	10	0	6	10	0	1	1	69

CHAPTER 12

FINDINGS AND IMPLICATIONS

Findings for non-classroom paraprofessionals are presented in this chapter. For the companion set of findings for classroom paraprofessionals, see Chapter 6.

This chapter contains information on the background characteristics and on-the-job activities of non-classroom paraprofessionals who hold seven different job titles: family assistant, educational assistant (who work as library aides), school aide, parent program assistant, family worker, auxiliary trainer, and teacher aide.. This chapter also reports the extent to which the job descriptions given by paraprofessionals themselves matched what their project directors expected them to do, what their immediate supervisors intended them to do as a result of daily supervision, and what their trainers taught them to do.

The Characteristics of Non-Classroom Paraprofessionals

What are non-classroom paraprofessionals like? Answers to this question came from interviews with a sample of 146 paraprofessionals out of the 325 employed in the Group H of the ESEA Title I and Group 8 of the New York State Urban Education programs. These non-classroom paraprofessionals are employed in 31 separate projects in 13 of the 31 separate decentralized school districts into which New York City is sub-divided.

The composite picture of the typical paraprofessional was drawn from the most frequent responses to background information items in the questionnaire.

The Typical Non-Classroom Paraprofessional

The typical non-classroom paraprofessional in the New York City schools is a 37-year-old married Black woman who was born in the South, was raised in a large city, and has lived in New York City for more than 15 years. Her husband is the head of the household; their family includes three children who live at home, two in elementary school and one in high school.

The family is dependent upon an income of $8,000 a year, of which the paraprofessional's wages constitute a substantial portion but less than half. She has no other job in addition to her work as a paraprofessional. She has a high school diploma but neither attended college nor even participated in a professional or vocational training program.

The typical paraprofessional belongs to only one organization, a school-connected group. On the other hand, she maintains active informal communication with the parents and children with whom she works -- even outside her job -- a relatively easy feat, since she lives within three blocks of most of them.

She works most often with Blacks and next most often with Puerto Ricans.

This picture of a typical non-classroom paraprofessional differs in only a few respects from that for all types of paraprofessionals, as established by IED in the 1969-70 In-Depth Study. The typical non-classroom paraprofessional in 1970-71 (as opposed to classroom and non-classroom paraprofessionals combined in 1969-70) is older by two years, has a higher family income by approximately $1,000, has one more child, and works two more hours per week. (The fact that New York City gave paraprofessionals a substantial salary raise in 1970-71, combined with the fact that the non-classroom paraprofessionals studied worked a few more hou-s per week than did all paraprofessionals last year, probablv explains the difference in income level.) Furthermore, since they are employed only for classroom work, student aides (high school students working as paraprofessionals) are absent from the present sample, and this absence may well explain the difference in median age and numbers of children between the 1969-70 group and the 1970-71 group.

In general, the present study confirms the results reported in the 1969-70 In-Depth Study, which said:

> In short, the typical paraprofessional has all the characteristics the literature says she should have. She is a member of an ethnic minority, her education is modest, her family income is low, she has children at home, and she works primarily with children who share her ethnic background.

The Range of Non-Classroom Paraprofessional Characteristics

Not all non-classroom paraprofessionals are alike, but most of them are quite similar to the typical paraprofessional described above.

Paraprofessionals range in age between about 25 and 60, although there are a handful under 25 or over 60. Over 70 percent of all paraprofessionals are married, and an additional 25 percent have been married at some time but are now separated, widowed, or divorced. Black paraprofessionals comprise 54 percent of the total, Puerto Ricans 22 percent, and whites 14 percent. No other groups are significantly represented.

Out of 146 paraprofessionals interviewed, only two are male. As explained in the 1969-70 In-Depth Study, "A job which runs less than 40 weeks a year and employs a person less than 25 hours a week . . . would barely support a single man and could hardly support a family . . . . Even as supplementary to a man's regular work, paraprofessional employment pays less than many of the other jobs available in New York City."

While paraprofessionals were born in all parts of the United States, there are heavy concentrations: One-third were born in New York City, one-third in the South, and about one-sixth in Puerto Rico and the Virgin Islands. Whatever their place of birth, they grew up largely in urban environments. About 50 percent spent most of their youth in a major city, and another 10 percent come from large towns. Most of the remainder come from farming areas.

Over 75 percent of the paraprofessionals have resided in New York City for more than 15 years; 95 percent have resided here for at least nine years; only one paraprofessional out of the 146 interviewed has lived in New York City less than five years. Long residence in the City would seem to be a desirable characteristic, especially for non-classroom paraprofessionals. They are frequently concerned with family welfare and social problems, which can be understood fully only through experience with the environment in which they occur. The social work aspects of non-classroom paraprofessional jobs can be greatly enhanced by close familiarity with surrounding neighborhoods. Two-thirds of the paraprofessionals have lived in their neighborhoods more than six years, and one-fourth have been there more than 15 years.

Evidently paraprofessional employment is helping somewhat to support large families among the poor. Even though the work is part-time and the pay scales for adult paraprofessionals range from $2.80 per hour to $4.50 per hour, one-third of all non-classroom paraprofessionals are heads of their household.

Although the number of children in paraprofessional families range from none to more than six, 95 percent of the paraprofessionals have at least one child. Almost 30 percent have four or more children. Only about 12 percent of all paraprofessionals have children of pre-school age, while almost 65 percent have children in elementary school and 47 percent have children in high school. The age ranges suggest that having pre-school children makes working even part-time rather difficult and presumably less profitable because of child-care expenses.

The total income in paraprofessionals' families ranges from less than $3,000 in 8 percent of the cases to more than $15,000 in 2 percent of the cases. The median number of people dependent upon this income is four, giving a per-capita income of $2,000 for the typical paraprofessional family earning $8,000. One-third (presumably the one-third who said they were heads of their household) report that their wages as paraprofessionals would supply "most" of their total family income in 1971. Almost no non-classroom paraprofessionals hold outside jobs. The only major source of income other than paraprofessional wages is the earnings of other household members. Unemployment compensation, welfare payments, and Social Security checks were mentioned by only a handful as supplementary sources. These facts indicate an admirable self-sufficiency on the part of the paraprofessionals.

Almost 80 percent of the paraprofessionals have their high school diploma or equivalent; about 25 percent of the group have had at least one year of college as well. Forty-one percent reported having had some kind of vocational training before becoming a paraprofessional. Forty percent of this group reported that their training had been in business and office work while almost 20 percent reported previous training in nursing. Both these skills are relevant to the current job assignments of most non-classroom paraprofessionals.

Almost 80 percent of the non-classroom paraprofessionals report that many of the children or families with whom they work live less than three blocks from their homes. Moreover, they see these children and families while out shopping or walking in the vicinity. In fact, a majority has taken care of at least some of the children they work with simply as a favor to the childrens' families and not because it was a job requirement. Their connections with their neighbors presumably constitute valuable links between the schools and the communities they serve.

When compared with the paraprofessionals described in the 1969-70 In-Depth Study, the 1970-71 non-classroom paraprofessionals do not differ appreciably in the range of their background characteristics.

Seven Key Variables

As explained in Chapter 10, "Instrument Selection and Development," previous research and professional literature have indicated that success in paraprofessional programs may be linked to seven key variables. Some of the variables have to do with the paraprofessionals themselves -- what kinds of people will themselves gain most from working as paraprofessionals? Others are important in developing sound school/community relations. Still others may determine whether the ultimate target population -- students -- will show improved achievement. Findings for non-classroom paraprofessionals on each of these seven variables is discussed below.

Ethnic Backgrounds. Several aspects of the paraprofessional program are said to depend for their success on the ethnic backgrounds of the participants. Use of paraprofessionals is emphasized in schools with high concentrations of ethnic and racial minorities for three reasons. First, school/community relations are frequently weakest in such schools. If paraprofessionals from minority racial and ethnic backgrounds work in such schools, their presence is expected to provide a link of familiarity and trust between the school and the community. Neighborhood residents can more readily understand the school and communicate with school officials. Second, minority children often find relating to school difficult because there are too few adults from similar backgrounds. Minority paraprofessionals are intended to provide a healthy example of ethnically similar adults with whom they can identify and whom they can emulate. Moreover, the paraprofessionals are expected to build a sense of trust and rapport in the children. Third, and equally important, hiring minority paraprofessionals provides them with an opportunity to improve their education and their finances and to raise their occupational aspirations.

As indicated in the preceding sections of this chapter, non-classroom paraprofessionals do come largely from minority backgrounds. Most are non-white, with more than one-half being Black and almost one-fourth Puerto Rican. The findings of the present study for non-classroom paraprofessionals confirm those of the 1969-70 In-Depth Study for classroom and non-classroom paraprofessionals combined. The high proportion of Blacks and Puerto Ricans demonstrates the hiring of the kinds of people that the goals of community relations, pupil learning, and paraprofessional self-improvement seemed to demand.

Ethnic Backgrounds of Target Population. It is of course essential to the goals mentioned above that paraprofessionals share the same ethnic and racial backgrounds as their target populations. For non-classroom paraprofessionals, this seems especially important for those who work in the community in social work roles.

Almost 60 percent of the non-classroom paraprofessionals reported that they work chiefly with Black or mixed Black populations; 20 percent reported that they work chiefly with Puerto Ricans; an additional 12 percent reported that they work with all kinds of target populations, including Blacks and Puerto Ricans. A substantial correspondence in ethnic and racial backgrounds is evident between paraprofessionals and the populations with whom they work.

Per-Capita Income. The paraprofessional program is intended in part to attack family poverty by providing jobs to people of low incomes. About 25 percent of non-classroom paraprofessionals reported per-capita incomes, including their wages as paraprofessionals, of less than $1,200. This is approximately the minimum necessary for a person to survive at the poverty level in New York City. Another 35 percent of the paraprofessionals reported per-capita family incomes ranging from $1,200 to $2,200, a very modest income for New York City residents. Inasmuch as the majority of non-classroom paraprofessionals are in families with per-capita incomes of $2,200 or less, the program clearly is making a significant attack on family poverty. For the 20 percent reporting per-capita incomes of $2,200 to $3,000, wages as a paraprofessional are undoubtedly a significant help to the family but somewhat less essential. For those whose families have per-capita incomes of more than $3,000, the objective of attacking poverty is probably not being achieved, even though other objectives may be well served by hiring these people.

The general conclusions of the 1969-70 In-Depth Study about both classroom and non-classroom paraprofessionals find support in the 1970-71 data on non-classroom paraprofessionals reported here.

Level of Education. Another objective of the program is to stimulate an interest in further education on the part of those employed. Considering that the median age of non-classroom paraprofessionals is 37, an age at which few adults take formal education courses, the participation of almost 40 percent of the paraprofessionals in such courses can be termed a remarkable success. About 30 percent are taking college, adult education, and other post-high school courses, while 10 percent are taking high school equivalency courses. Since 20 percent of the non-high school paraprofessionals do not have their high school diplomas, the 10 percent represents one-half of all those without diplomas. Such participation in formal education represents a significant achievement for the paraprofessional program.

Numbers and Ages of Children. Previous studies have suggested that the employment of women with children as paraprofessionals provides a two-way benefit. In one direction, what the paraprofessional learns in her work is carried home and benefits her children. In the other direction, raising children helps the paraprofessional perform her work better. Since almost 95 percent of the non-classroom paraprofessionals either are married now or were married in the past but are now separated, divorced, or widowed, and virtually all these women have children, this objective is presumably being accomplished. Moreover, most paraprofessionals have school-age children living with them now, so the benefits to these children are probably direct and immediate.

These results confirm those of the 1969-70 In-Depth Study. However, since non-classroom paraprofessionals less often work directly with children than do classroom paraprofessionals, the benefits for the children may be diminished somewhat.

Community Linkages. Providing better understanding and communication between the school and community is one objective of the paraprofessional program that seems to be well served by the fact that paraprofessionals are long-term residents not only of New York City but of the particular neighborhoods in which they work. The informal associations among people that arise from living close together evidently are taking place, as shown by the fact that paraprofessionals are personally acquainted with many of the parents and children with whom they work. These linkages clearly enhance the ability of the paraprofessional to increase rapport between school and community. Formal memberships in organizations are probably not the most natural form of social interchange for paraprofessionals, as shown by the fact that over half belong to no more than one organization -- usually a school, community, or charitable group. Only 25 percent belong to three or more organizations. An elaborate discussion of community linkages as an important aspect of paraprofessional employment is contained in the 1969-70 In-Depth Study and accordingly is not repeated here.

Previous Job Experience. If a paraprofessional has been employed before, that prior job experience will presumably have taught her useful skills as well as having built habits of punctuality and reliability on the job. Moreover, if she has been employed previously in a kind of work which has lower status, pays lower wages, or requires lower skills than paraprofessional employment, becoming a paraprofessional may be an important first step on a career ladder that will lead her on to better jobs, perhaps even to a professional career. An important objective of paraprofessional programs is to open up semi-professional and professional career lines that are often closed to members of minority groups.

Over 30 percent of the respondents did not list any previous job. If it can be assumed that they are experiencing their first paid employment as paraprofessionals, then 30 percent of this group has entered the world of work for the first time through the paraprofessional program. Even if the 30 percent figure has been inflated somewhat by the failure of some respondents to list previous jobs, a program that provides initial jobs at a semi-professional level to even 15 percent of the kinds of people who fill paraprofessional jobs is a noteworthy achievement.

Using the ten U.S. Bureau of Census job categories, ranging from professional and technical worker to unskilled laborer, IED examined the occupational mobility of the paraprofessionals. For this purpose, paraprofessional employment was regarded as comparable to the "clerical" and "sales" classifications. An examination of occupational movement by paraprofessionals shows that most of them have moved neither up nor down but horizontally from previous clerical (23 percent) or sales (11 percent) jobs into paraprofessional employment. At the same time, an appreciable number have left jobs as laborers (13 percent), service workers (8 percent), or private household workers (3 percent) to move up into paraprofessional jobs. Another ten percent report that they had left professional jobs to become paraprofessionals, a step presumably taken by well-educated mothers returning to paid employment after their children have grown.

The overall pattern here resembles that found in the 1969-70 In-Depth Study, where it was noted that there is presumably some conflict between the desirability of having a well-educated paraprofessional who will be effective with school children and the desirability of helping the under-educated person break into his first semi-professional job. As was the case with that study, the current data suggested that while both objectives are being met, the first is being served somewhat at the expense of the second.

The Work and Training of Non-Classroom Paraprofessionals

Non-classroom paraprofessionals perform their work under seven different job titles and are unevenly distributed over these titles, as follows:

Job Title	Percent
Family Assistant	30
Library Aide	21
Parent Program Assistant	15
School Aide	14
Family Worker	10
Auxiliary Trainer	8
Teacher Aide	3

Although all these titles are classified under the "non-classroom" category to distinguish them from paraprofessionals who work directly with children in the classrooms, the titles themselves can be clustered into parent/community workers, who take roles analogous to those of social workers, and aides who provide manpower that releases teachers and other professional employees such as librarians to pursue tasks requiring their expert knowledge. However, because the data reveal only occasional differences in the characteristics of jobs with the different titles, generalizations about paraprofessional work can be made across the whole span of paraprofessional work titles.

The Work of a Typical Non-Classroom Paraprofessional

The typical worker is in her third year as a paraprofessional and serves as a family assistant. She works 26 to 30 hours a week in an elementary school in the school district in which she lives. Her work occupies her only during school hours. She works only in the school building but moves from offices to classrooms to other locations. She works most often with Blacks and next most often with Puerto Ricans. Ordinarily she does not teach students; when she does work with students directly, her work is concentrated in Grade 2. She knows no foreign languages. The school principal supervises her work continuously.

The typical paraprofessional had no pre-service training before her job began, but has received part-time in-service training since taking the job. Roughly half of those receiving such training report that it occupies more than five weeks a year. The training usually takes place outside the school at a central location within the school district. Training sessions are usually scheduled twice a month for more than an hour and take place during the regular school day. The typical paraprofessional finds herself in a group training session along with paraprofessionals from other schools in the district. Occasionally, a school official such as a principal or an assistant principal attends a training session, but the person most likely to attend is the coordinator of the project, followed closely by the auxiliary trainer, a guidance counselor, or a teacher trainer. Most school officials, if they attend the training sessions at all, come irregularly. Typical topics at the training sessions included techniques for identifying community services for families, procedures in counseling parents and students, and methods of disciplining and caring for children, It is worth noting that almost 25 percent of the non-classroom paraprofessionals were trained in techniques of classroom instruction and classroom management. This is further evidence that an appreciable proportion of their work is expected to take place with children in school buildings and often in classroom settings.

The typical training session is built around group discussions. Lectures are more common than demonstrations or role playing. Individual conferences are held occasionally as part of the training. While outside speakers are often brought in to training sessions, field trips are rare and audio-visual instruction is uncommon.

The typical paraprofessional is still in training, but does not participate in the Career Ladder Program offered by the Board of Education and is not taking college courses.

Variations in the Work of Non-Classroom Paraprofessionals

While the typical paraprofessional has been employed three years (28 percent), there are significant numbers who have worked for two years (25 percent), one year (17 percent), and four years (15 percent). Only six percent have worked for five years or longer. Considering that the paraprofessional program is only about five years old, it is exhibiting substantial holding power.

The heavy majority of non-classroom paraprofessionals work in elementary schools (80 percent). The others work in junior high schools (10 percent) and, to a lesser extent, in intermediate schools and district offices (less than 5 percent in each case). In most cases (over 80 percent), the schools are located in the school district where the paraprofessionals live.

Paraprofessional work patterns within the schools show substantial similarity. About 80 percent work between 16 and 30 hours a week, with most working more than 20 hours. Not many work fewer than 16 or more than 30 hours a week.

Where and when do paraprofessionals spend these hours? Almost 75 percent work exclusively during school hours; the other 25 percent split their time between school hours and after-school hours, including weekends. Because over half of the non-classroom paraprofessionals perform under titles that suggest that they are performing a kind of social work, there is a question as to how effective the work can be when it is done entirely during school hours. Families often are not at home during the middle of the day; thus, locating them can be difficult. It does not seem that social work would lend itself well to a regular nine o'clock to two o'clock work schedule.

This misgiving is strengthened by the fact that over 80 percent of the paraprofessionals report that they do most of their work in school; only 12 percent say that they work primarily outside of school. To help families with problems that affect them and hence indirectly influence their childrens' performance in school does not seem to be a job that can be performed easily from a central location. Instead, it would seem to require considerable traveling through the neighborhood.

Within the school, almost 40 percent of the paraprofessionals report spending at least some of their time in school offices, the location cited most often. Between 20 and 30 percent report spending at least some of their time in each of the following: classrooms, guidance offices, community agencies, district offices, and homes of students.

That so much of the non-classroom paraprofessional's work is done within the school building during school hours helps to explain the supervision they report receiving. The majority (52 percent) say that someone directs and inspects their work more often than once a day, and an additional 18 percent report that they are supervised once a day. Except for the five percent who report never being supervised at all, the rest report receiving supervisory attention weekly or less often. On the whole, paraprofessionals seem to be well supervised, especially when the source of that supervision is considered. Over 45 percent of the paraprofessionals report that the person most often supervising their work is the principal or assistant principal. Another 13 percent (presumably the library aides) report supervision from the librarian. It is apparent that the principal or his assistant supplies the bulk of supervision to those paraprofessionals who are not library aides. Guidance counselors supervise 11 percent of the paraprofessionals; other school personnel, including teachers, are listed by only a few paraprofessionals.

Non-classroom paraprofessionals work largely with minority group students and parents. Almost 50 percent report that they deal most often with Blacks; 20 percent say they deal most often with Puerto Ricans. Whites, Orientals, and other groups are the primary concern of very few paraprofessionals.

Despite the descriptive adjective "non-classroom," most of these paraprofessionals (over 75 percent) work directly with students at least some of the time. Many work with students at several different grade levels, but most attention is given to younger students in the elementary schools. About half the non-classroom paraprofessionals report that they teach students. Almost all of the teaching or tutoring done by non-classroom paraprofessionals is in reading and arithmetic. Almost 35 percent report teaching or tutoring in reading, and about 15 percent report similar activity in arithmetic. Other subject areas are scarcely touched by paraprofessionals. Most of those other subjects, such as science, foreign language, and history or social studies, are not emphasized in the primary grades, where paraprofessionals are concentrated.

Specific Job Activities of Non-Classroom Paraprofessionals

Rather than describing job activities for non-classroom paraprofessionals as a group, job activities will be reported for each title separately in a later section. There is sufficient variation in job title and apparent job responsibility to merit a separate examination of each of the seven positions.

Variations in the Training of Non-Classroom Paraprofessionals

Whereas the typical paraprofessional had no pre-service training, almost 20 percent of the total group received training before beginning their work. That pre-service training was usually provided on a part-time basis for a period ranging from a few days to more than five weeks. For a small number of paraprofessionals, the pre-service training was conducted full time; that training also extended from a few days to several weeks.

About 55 percent of the paraprofessionals received in-service training, in contrast to the 20 percent who received pre-service training. Of course, this in-service training was almost always supplied part-time. While in most cases it is longer than five weeks in duration, frequently extending throughout the year, a sizable minority of paraprofessionals receive less than four weeks of part-time training.

While training ordinarily takes place outside the school but within the school district, an appreciable number of paraprofessionals are trained in their own school buildings. Although training is almost always held during the school hours, it ranges in frequency from more than once a week to less than once a month and in length from an hour or less to half a day or more.

The topics covered in the training vary considerably -- which is not surprising in view of the numerous job titles being covered. What is surprising is the degree of attention given to direct work with children and to activities directly related to classroom instruction, such as how to instruct children in reading and arithmetic, how to make instructional materials, and how to manage classrooms. There is, as would be expected, attention to topics which would be of special use to a parent/community paraprofessional, such as how to collect information about health services, employment opportunities, and housing facilities and how to transmit that information to parents.

Although there is some diversity in training techniques used, the group discussion method predominates. Lectures, role playing, demonstrations, and occasional individual conferences supplement the use of group discussions. In addition to the use of outside speakers, which is common, films and film strips are occasionally used, and somewhat less frequent use is made of recordings, video tapes, and field trips.

Almost 18 percent of those responding to the questionnaire say they participate in the Career Ladder Program offered by the Board of Education. While this is an appreciable number, an expansion of opportunities available through that program would seem to be highly desirable for this population group, given their limited educational backgrounds and the fact that only about 25 percent of the paraprofessionals are taking high school, college, or adult education courses on their own initiative.

The Relation of Paraprofessional Characteristics and Work to Title of Position

There are almost no noticeable differences in the background characteristics of the people filling the seven different non-classroom paraprofessional positions studied: family assistant, library aide, parent program assistant, school aide, family worker, auxiliary trainer, and teacher aide.

The minor differences in age and level of education that do occur are what would be expected from the job descriptions and the job requirements for the position. For example, auxiliary trainers and parent program assistants are more likely than the other five types of paraprofessionals to have some college training. But even there, the differences are not great. What is most impressive to discover about the relation of background characteristics to various paraprofessional titles is that there seems to be a very wide range indeed in the kinds of people who can succeed in the various paraprofessional positions.

The same general pattern becomes immediately apparent upon an examination of differences in the work and the job circumstances of paraprofessionals holding the seven different titles; the similarities are far more impressive than the differences. The occasional small differences are what would be expected, given the responsibilities of the various jobs, and hardly merit comment. For example, family assistants and family workers are more likely to work after school hours and to work outside the school than paraprofessionals in other positions. This is not at all surprising, given the fact that these are parent/community paraprofessionals who would be expected to attend community meetings and to make occasional home visits. A greater surprise lies in the fact that family assistants and family workers do not spend more of their time in the community and in homes both during the school day and after school hours.

What becomes apparent from a study of the data is that many family assistants and family workers serve as "community receptionists" inside the schools during regular school hours, presumably giving the parents of disadvantaged children a feeling of easier access to the school because they can work comfortably with these paraprofessionals. This means that the image of a parent/community paraprofessional as a social worker who makes a regular round of home visits is not accurate. These positions can be better understood as those of institutional social workers, whose time and place of job performance does not differ from that of other members of the institutional staff.

Specific Job Activities by Paraprofessionals

It is only when paraprofessional jobs are broken down into very small, discrete tasks at the level of detail used in IED's 207-item job descriptions questionnaire (Section B of the two-part background information and job descriptions instrument appearing in Appendix G, p. A-189) that distinctions between various paraprofessional jobs finally appear. At the level of detail reached in that questionnaire, the jobs separate and take on a distinctive character.

To show the clear differences among the seven paraprofessional jobs, the tables on pp. 114-118 list in order of frequency the ten (more in the case of items tied for ranking) specific tasks most often checked by paraprofessionals holding each job title. Paraprofessionals were credited with performing the tasks only if they said they did it "fairly often" or "very often."

A study of the items shows that some jobs appear to be particularly straightforward in conception and uncluttered in execution. The relatively "pure" jobs appear to be these: auxiliary trainer, educational assistant (library aide in this case), and school aide. The jobs that have the incumbents performing a mixed assortment of tasks appear to be these: parent program assistant, family assistant, family worker, and teacher aide.

The mixture of tasks within the last four jobs would presumably create some difficulties in building a training program for the persons holding them and would simultaneously make it difficult for supervisors to establish job performance expectations. In the 1969-70 In-Depth Study, IED identified the role of family worker as one that lacked clarity and definition and suggested that it should be re-examined and reconceived. It becomes clear from the current study that the same thing can be said of parent program assistants, family assistants, and teacher aides.

The parent program assistant is heavily occupied in advising other paraprofessionals and keeping records of their activities but is simultaneously involved in taking messages to and from the school district office and distributing notices of parent meetings. The teacher aide works directly with the students, with other paraprofessionals, with the trainers of paraprofessionals, with parents and carries out assorted tasks in the school office.

Finally, the roles of family assistants and family workers seem to be comprised in roughly equal parts of direct work with students and work with parents. If family assistants and family workers are intended to be parent/community paraprofessionals concentrating their efforts on adults in the school neighborhood, both jobs would need to be modified so as to eliminate the substantial number of tasks that place family assistants and family workers in direct contact with pupils inside the school during the school day. While this contact with pupils undoubtedly helps these paraprofessionals understand their problems, the data indicate that they may also interfere with their ability to move out into the community and work with adult members of the families they are expected to serve.

An examination of the most frequent duties mentioned by auxiliary trainers and parent program assistants shows a certain amount of overlap, particularly with respect to the training of paraprofessionals. There is a similar overlap between the jobs of family assistants and family workers, especially in the direct work with pupils.

No other pairs of jobs show any appreciable overlap. The educational assistant serving as a library aide seems to enjoy a remarkably well-defined job: Every task named fits squarely with the limited and straightforward conception of this position. School aides also perform tasks at a homogeneous level of difficulty and presumably experience little tension among the tasks they are assigned.

MOST FREQUENTLY PERFORMED TASKS

FAMILY ASSISTANT

1. Showing affection and warmth to a troubled child by holding or caressing him.
2. Listening attentively to a troubled child, thereby letting him talk out a problem.
3. Telling families about activities in their school or in other schools, such as parent-teacher workshops, tutoring, and pre-school programs.
4. Using their knowledge of the community to help the school staff understand what parents want for their children.
5. Visiting parents in their homes to discuss problems a child is having in the classroom.
6. Keeping a daily log of their duties.
7. Talking quietly to a child who is upset or disturbing the class.
8. Hearing complaints from parents about problems they have with the school.
9. Telling families about available health clinics, vaccination programs, medical tests, or other health services they can use.
10. Keeping lists of people they can call about health, employment, housing, welfare, or legal problems.

EDUCATIONAL ASSISTANT

1. Unpacking and processing new library books (pasting pockets, labeling with call numbers, stamping all materials, etc.).
2. Processing magazines and periodicals (stamp, shelve, and apply plastic binders) when they first arrive in the library.
3. Taking care of books; for example, repairing bindings, erasing pencil marks, and taping torn pages.
4. Assisting the librarian in taking inventory of library books and materials.
5. Checking card catalogue for duplicate cards.

6. Helping to maintain a functional, attractive library by decorating the room and performing light housekeeping duties.

7. Demonstrating to students the proper way to locate and replace books on library shelves.

8. Maintaining a list of all books and materials located in the library.

9. Assisting students in locating library materials, such as books, maps, and charts.

10. Checking out books for students in the library or schoolroom.

PARENT PROGRAM ASSISTANT

1. Keeping in close contact with the district offices by sending messages, making deliveries, and picking up materials.

2. Answering any questions the paraprofessionals may have concerning their job responsibilities; for example, performing certain tasks assigned by a member of their school staff that were not originally stated in their job specifications.

3. Preparing the paraprofessional payroll for their school, collecting time sheets, handing out paychecks, and checking time cards.

4. Keeping an updated list of all paraprofessionals who are enrolled in a college program.

5. Keeping attendance records for paraprofessionals taking part in training.

6. Keeping records of names, addresses, and telephone numbers of paraprofessionals, families, and students they work with.

7. Keeping records of names, addresses, telephone numbers, and other basic information of the paraprofessionals they train.

8. Distributing routine notices, such as announcements of Parent Association meetings, school staff meetings, and schedule changes.

9. Distributing routine notices, memos, and announcements of training meetings to the paraprofessionals in their district.

10. Greeting parents, community leaders, and others who come to the school.

SCHOOL AIDE

1. Monitoring the doors and hallways of the school.
2. Assisting in the supervision of students arriving and leaving the school building.
3. Taking charge of students on a bus, in a cafeteria, on the playground, or in assembly.
4. Stopping arguments and fights among students.
5. Assisting in collecting and recording money for the school bank, lunch, or special trips.
6. Distributing routine notices, such as records, papers, and mail.
7. Filing and sorting materials, such as records, papers, and mail.
8. Operating a duplicating machine, such as a mimeograph, ditto, xerox, or rexograph.
9. Helping children put on and take off their hats and coats.
10. Performing clerical work in the school office, such as filing, typing, and answering the phone.

FAMILY WORKER

1. Visiting parents in their homes to discuss problems their child is having in school.
2. Explaining to parents the importance of keeping clinic appointments.
3. Showing affection and warmth to a troubled child by holding or caressing him.
4. Keeping a daily log of duties.
5. Taking home children who are ill.
6. Listening to parents talk about problems they have with their landlords or building superintendents, or in finding new places to live.
7. Telling families about available health clinics, vaccination programs, medical tests, or other health services they can use.

8. Talking with a teacher, counselor, or other member of the school staff about a child with a special health problem, such as poor vision or hearing.

9. Using their knowledge of the community to help the school staff understand what parents want for their children.

10. Listening attentively to a troubled child, thereby letting him talk out a problem.

11. Inviting families to school meetings and community workshops to discuss school problems.

AUXILIARY TRAINER

1. Listening to paraprofessionals talk about their classes and things they are learning in the classroom or in college courses, and problems they have with their teachers, school, or school work.

2. Answering any questions the paraprofessionals may have concerning their job responsibilities; for example, performing certain tasks assigned by a member of their school staff that were not originally stated in their job specifications.

3. Assisting with experiments or demonstrations during a training session.

4. Working with a supervisor (district trainer, trainer coordinator, etc.) on plans for future training sessions.

5. Hearing complaints from paraprofessionals about problems they have with teachers or administrators; for example, questions regarding their job responsibilities.

6. Setting up and arranging meetings for the paraprofessionals in their district; for example, reserving a room, announcing a meeting, and preparing materials.

7. Supplying names of those paraprofessionals who are interested in the college opportunities program to the district office.

8. Keeping an updated list of all paraprofessionals who are enrolled in a college program.

9. Attending conferences, lectures, and workshops to learn how to train paraprofessionals.

10. Keeping records of names, addresses, and telephone numbers of paraprofessionals, families, and students they work with.

11. Orienting new paraprofessionals to their job--describing their job duties and introducing them to the people they will work with.

TEACHER AIDE

1. Keeping a daily log of duties.

2. Explaining school rules to students.

3. Learning about special programs the school has to offer, such as tutoring, remedial reading, Black or Puerto Rican cultural classed, etc.

4. Reporting discipline problems to a principal, counselor, teacher, parent, other.

5. Showing affection and warmth to a troubled child, thereby letting him talk out a problem.

7. Listening to paraprofessionals talk about their classes, things they are learning in the classroom or in college courses, and problems they have with their teachers, school, or school work.

8. Keeping the principals and other school administrators informed of what the paraprofessionals are learning during their training.

9. Telling families about activities in their school or in other schools, such as parent-teacher workshops, tutoring, and preschool programs.

10. Hearing complaints from parents from parents about problems they have with the school.

11. Keeping in close contact with the district office by sending messages, making deliveries, and picking up materials.

12. Handing out and collecting materials during a paraprofessional training session.

13. Answering and using the telephone and processing mail at training headquarters.

Training

There are few differences in the training that paraprofessionals holding various job titles have received. The differences that do occur are those that would be expected. For example, paraprofessionals occupying higher-paying jobs such as auxiliary trainer or parent program assistant report having had more extensive training of longer duration than other paraprofessionals. It is evident from the data that if principals or other school officials attend training sessions, they are more likely to attend training sessions for paraprofessionals in the higher-paying positions. If a school staff specialist such as a librarian or a guidance counselor attend paraprofessional training sessions, he shows up at the places one would expect: Librarians attend sessions for educational assistants (library aides), while counselors attend training sessions for family assistants and family workers.

Similarly, paraprofessionals in higher-paying jobs with greater responsibilities more often report taking college-level courses either as part of their paraprofessional training program or on their own initiative. Paraprofessionals in lower-paying jobs, such as school aide, more often report taking high school equivalency courses.

As would be expected, auxiliary trainers and parent program assistants are more likely than other paraprofessionals to be taking part in the Career Ladder Program of the Board of Education.

An analysis of the content of training for the various paraprofessionals reveals once again the mixed expectations of those holding certain titles. For example, family assistants and, to an even greater extent, family workers are regularly trained in classroom management procedures.

Separate Reports for 13 Decentralized Districts. It was originally intended that a report on non-classroom paraprofessionals would be prepared for each of the 13 decentralized districts in New York City in which the paraprofessionals being studied are employed. The plan was to report on each variable for the total population of paraprofessionals and to supply a breakdown by each of the seven job titles. However, an examination of the data showed that the number of non-classroom paraprofessionals in each district is extremely limited. The number of paraprofessionals employed in non-classroom work ranges from a low of 2 to a high of 39. This results in a wide scattering of data for paraprofessionals across seven titles in the 13 districts and makes it impossible to detect any meaningful patterns. For this reason, separate analyses for each district are not reported. However, because of the remarkably high degree of similarity among responses from paraprofessionals and others interviewed, the findings reported here can be read as applicable to each of the districts employing paraprofessionals of any given type.

Comparison of Views About Paraprofessional Performance among Project Directors, Immediate Supervisors, Trainers, and Paraprofessionals Themselves

As explained in Chapter 10, "Instrument Selection and Development," IED asked all project directors, immediate supervisors, and trainers who dealt with the non-classroom paraprofessionals drawn in the sample for this study to fill out a copy of the 207-item Job Description Questionnaire (See Appendix G, p. A-189) indicating their understanding of what tasks were appropriate for the individual paraprofessionals whose names were supplied to them. Project directors were asked what they expected paraprofessionals to do; immediate supervisors were asked what paraprofessionals were actually doing; trainers were asked what they had been training paraprofessionals to do. Through an elaborate computer analysis, IED constructed similarity measures (based on the exact hypergeometric distribution) to determine the degree of agreement between project directors and paraprofessionals, supervisors and paraprofessionals, project directors and supervisors, project directors and trainers, and supervisors and trainers. The analysis of all six pairs of observations across all seven job titles revealed a remarkably high degree of agreement. The statistics are shown below:

Pair	Probability
Paraprofessional and project director	.05
Paraprofessional and supervisor	.02
Paraprofessional and trainer	.07
Project director and supervisor	.05
Project director and trainer	.04
Supervisor and trainer	.02

These figures show a degree of agreement among the six pairs in the way they independently checked the 207-item questionnaire which would occur by chance no more often than two to seven times out of 100.

To supplement this similarity measure, the lists that follow contain the specific items on which the largest number of respondents reached the highest degree of agreement about paraprofessional tasks for each of the seven job titles. That is, for each title, the lists contained the items most often checked by the six pairs of respondents listed in the table above. The percentages of agreement on the items in these lists range from a high of 100 percent to a low of 43 percent.

The job titles for which there is closest agreement among paraprofessionals, their project directors, their supervisors, and their trainers as to what tasks are performed, should be performed, and are the object of training for satisfactory performance are the following: 1) auxiliary trainer, 2) parent program assistant, and 3) teacher aide.

The job titles on which there is somewhat lower agreement are these: 1) educational assistant, 2) family assistant, 3) family worker, and 4) school aide. This ranking confirms the observations made earlier except that, not surprisingly, it places the job of school aide at the bottom of the list. It was observed above that this role is homogeneous in the relatively low level of task performance required but it is evident that the great diversity of tasks assigned to school aides leads to disagreement about what they are expected to do. The ranking also fails to confirm that the educational assistant (library aide) appears as clear-cut and definitive to all observers as might be expected.

HIGHEST DEGREE OF AGREEMENT ON TASKS PERFORMED

FAMILY ASSISTANT

1. Visiting parents in their homes to discuss problems their child is having in school.
2. Showing affection and warmth to a troubled child by holding or caressing him.
3. Listening attentively to a troubled child, thereby letting him talk out a problem.
4. Telling families about activities in your school or in other schools, such as parent-teacher workshops, tutoring, and pre-school programs.
5. Talking quietly to a child who is upset or disturbing the class.
6. Using your knowledge of the community to help the school staff understanding what parents want for their children.
7. Hearing complaints from parents about problems they have with the school.
8. Explaining to parents the importance of keeping clinic appointments.
9. Keeping a daily log of your duties.
10. Keeping lists of people you can call about health, employment, housing, welfare, or legal problems.

EDUCATIONAL ASSISTANT

1. Unpacking and processing new library books (pasting pockets, labeling with call numbers, stamping all materials, etc.).
2. Taking care of books; for example, repairing bindings, erasing pencil marks, and taping torn pages.
3. Processing magazines and periodicals (stamp, shelve, and apply plastic binders) when they first arrive in the library.
4. Assisting students in locating library materials, such as books, maps, and charts.
5. Checking card catalogue for duplicate cards.

6. Assisting the librarian in taking inventory of library books and materials.

7. Demonstrating to students the proper way to locate and replace books on library shelves.

8. Keeping records to be sure all books and magazines are arriving promptly and regularly.

9. Helping to maintain a functional, attractive library by decorating the room and performing light housekeeping duties.

10. Maintaining a list of all books and materials located in the library.

PARENT PROGRAM ASSISTANT

1. Preparing the paraprofessional payroll for your school: collecting time sheets, handing out paychecks, and checking time sheets.

2. Keeping records of names, addresses, telephone numbers, and other basic information of the paraprofessionals you train.

3. Keeping an updated list of all paraprofessionals who are enrolled in a college program.

4. Keeping attendance records for paraprofessionals taking part in training.

5. Keeping in close contact with the district office by sending messages, making deliveries, and picking up materials.

6. Answering any questions the paraprofessionals may have concerning their job responsibilities; for example, performing certain tasks assigned by a member of their school staff which were not originally stated in their job specifications.

7. Distributing routine notices, memos, and announcements of training meetings to the paraprofessionals in your district.

8. Checking the daily attendance and time cards of paraprofessionals and school aides.

9. Supplying names of those paraprofessionals who are interested in the college opportunities program to the district office.

10. Keeping records of names, addresses, and telephone numbers of paraprofessionals, families, and students you work with.

SCHOOL AIDES

1. Monitoring the doors and hallways of the school.
2. Taking charge of students on a bus, in a cafeteria, on the playground, or in assembly.
3. Assisting in the supervision of students arriving and leaving the school building.
4. Stopping arguments and fights among students.
5. Assisting in collecting and recording money for the school bank, lunch, or special trips.
6. Distributing routine notices, such as announcements of Parent Association meetings, school staff meetings, and schedule changes.
7. Helping children put on and take off their hats and coats.
8. Taking home children who are ill.
9. Serving as an interpreter for the principal, guidance counselor, or other members of the school staff and non-English speaking parents.
10. Accompanying students to the library, lunchroom, or another class.

FAMILY WORKER

1. Visiting parents in their homes to discuss problems their child is having in school.
2. Explaining to parents the importance of keeping clinic appointments.
3. Showing affection and warmth to a troubled child by holding or caressing him.
4. Listening to students talk about their classes, things they are learning, or problems they have with other students, teachers or their school work.
5. Keeping a daily log of your duties.
6. Listening attentively to a troubled child, thereby letting him talk out a problem.
7. Arranging meetings between a student and his guidance counselor or teacher to discuss a problem the student has in school, such as frequent tardiness, dropping out, suspension, or a learning problem.
8. Taking home children who are ill.

9. Using your knowledge of the community to help the school staff understand what parents want for their children.

10. Sending notices to parents of students who have been late or absent a great deal.

AUXILIARY TRAINER

1. Listening to paraprofessionals talk about their classes, things they are learning in the classroom or in college courses, and problems they have with their teachers, school, or school work.

2. Answering any questions the paraprofessionals may have concerning their job responsibilities; for example, performing certain tasks assigned by a member of their school staff which were not originally stated in their job specifications.

3. Assisting with experiments or demonstrations during a training session.

4. Working with your supervisor (district trainer, trainer-coordinator, ets.) on plans for future training sessions.

5. Hearing complaints from paraprofessionals about problems they have with teachers or administrators; for example, questions regarding their job responsibilities.

6. Setting up and arranging meetings for the paraprofessionals in your district; for example reserving a room, announcing a meeting, and preparing materials.

7. Supplying names of those paraprofessionals who are interested in the college opportunities program to the district office.

8. Keeping an updated list of all paraprofessionals who are enrolled in a college program.

9. Attending conferences, lectures, and workshops to learn how to train paraprofessionals.

10. Keeping records of names, addresses, and telephone numbers of paraprofessionals, families, and students you work with.

11. Orienting new paraprofessionals to their job, such as describing job duties and introducing them to the people they will work with.

TEACHER AIDE

1. Conducting small group instruction with paraprofessionals during training sessions.

2. Keeping attendance records for paraprofessionals taking part in training.

3. Distributing routine notices, memos, and announcements of training meetings to the paraprofessionals in your district.

4. Taking minutes at training meetings.

5. Attending conferences, lectures, and workshops to learn how to train paraprofessionals.

6. Setting up and arranging meetings for the paraprofessionals in your district; for example, reserving a room, announcing a meeting, and preparing materials.

7. Handing out and collecting materials during a paraprofessional training session.

8. Answering and using the telephone and processing mail at training headquarters.

9. Explaining school rules to students.

10. Reporting discipline problems to a principal, counselor, teacher, parent, or others.

What can be said in general about the remarkably high degree of agreement reached among those who train paraprofessionals, supervise their work, and conceive their jobs is at least this: What paraprofessionals say they do is what those in charge of their work believe they should do and (in the case of their immediate supervisors) confirm that they actually do. This finding supplies an important underpinning to the more elaborate data in IED's 1969-70 In-Depth Study, which were drawn entirely from paraprofessionals. The tasks that paraprofessionals reported doing seemed generally reasonable last year, but there was no way to be certain that the paraprofessionals were actually carrying out such tasks. This year's data supply the necessary confirmation.

It is surely a tribute to the way the paraprofessional program has been conceived and managed in the New York City schools that there can be such close agreement among the principal parties as to the tasks paraprofessionals should perform. Reaching such agreement is an important step in institutionalizing a new role and making it fully effective.

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APPENDICES

APPENDIX A

ESEA Title I and New York State Urban Education Paraprofessional Projects in Selected Districts
Group H and Group 8

GROUP H
PARAPROFESSIONAL GROUP
ESEA TITLE I PROGRAM

DISTRICT	PROJECT TITLE
1	*Auxiliary Educational Careers Unit
2	*Pilot School in the Home
2	*Utilization of Library Assistance (Paraprofessional in Library)
2	*Education Task Force
4	*Paraprofessionals in the Library
5	*Auxiliary Educational Careers Unit
5	Grade 3 (IS 201)
5	*Grades 4 and 5 (IS 201)
5	*Parent Program Assistants
5	Supportive Service in Language Arts Program
9	*Auxiliary Training Unit
9	*Classroom Ed: Corps Early Elementary
9	*Classroom Ed: Corps Later Elementary
9	*Parental Involvement

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*Project provided paraprofessionals for the non-classroom phase of this study.

#Project not included in this evaluation because of late notification (6-22-71).

DISTRICT	PROJECT TITLE
9	*#School Neighborhood Workers
15	*Educ. Assistant Training Project
17	Educational Assistants
17	*Family Assistants (Parental Involvement)
17	*School Aides
18	*Improvement of Instruction (Parental Involvement)
19	*Family Assistants Receptionist Aide
19	*Paraprofessionals Supportive Service (Ed. Asst.)
19	*Library Aide Program
21	Auxiliary Training Program
27	*Paraprofessional Training
28	*Parent Involvement
29	*Auxiliary Training Team
29	*Auxiliary Personnel in JHS 192
30	*Supervision of Children: Queensbridge Houses

GROUP 8
PARAPROFESSIONALS
NEW YORK STATE URBAN EDUCATION PROGRAM

DISTRICT	PROJECT TITLE
1	Elementary School Educ. Asst. Upper Grades 3-6
2	*School-Home liaison
2	Utilization of Educational Assistants
2	*Utilization of Library Assistants
4	*Family Assistants-Home liaison
4	Educational Assistants Grades 3-6
4	*Parent Program Assistants
4	Educational Assistants in Junior High Schools
15	*Guidance Aides Program
17	Educational Assistants
17	*Family Assistants
18	Utilization of Educational Assistants
21	Parent Helpers
22	Educational Assistants To Aid Underachievers

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*Project provided paraprofessionals for the non-classroom phase of this study.

APPENDIX B

List of Classrooms Participating in the Study

District	School	Principal	Teacher
1	P.S. 64 The Henry P. O'Neil School 605 East 9th Street New York, New York 10009	John F. Piselli	M. Altfest R. McGrath
1	P.S. 97 Mangin School 525 East Houston Street New York, New York 10002	Herbert N. Krasnoff	L. Blecher M. Goldstein
1	P.S. 140 Nathan Straus School 123 Ridge Street New York, New York 10002	Samuel Margolis	D. Adler B. Leeds B. Mizel
2	P.S. 33 Chelsea School 281 9th Avenue New York, New York 10001	Harold Levine	P. Gerstein G. Korohais
3	P.S. 75 Emily Dickinson School 735 West End Avenue New York, New York 10025	Judith Ellner	M. Dumbar D. Thom
3	P.S. 87 160 West 78th Street New York, New York 10024	Arthur L. Block	B. Dorman R. Miller L. Schwartz
3	P.S. 113 240 West 113th Street New York, New York 10026	Mildred D. Chaplin	E. Pomerantz H. Stahl
3	P.S. 144 Hans Christian Anderson School 134 West 122nd Street New York, New York 10027	Ann Spero	B. Schnall R. Silver
3	P.S. 180 Hugo Newman School 370 West 120th Street New York, New York 10027	Max Weinstein	L. Amsterdam B. Dorfman S. Holt D. Milcetic N. Spearman

District	School	Principal	Teacher
4	P.S. 57 The James Weldon Johnson School 176 East 115th Street New York, New York 10029	Harry A. Horowitz	R. Cassese F. Jackson
4	P.S. 72 131 East 104th Street New York, New York 10029	Milton Rouder	R. Adinolfi J. Traynor
4	P.S. 107 1680 Lexington Avenue New York, New York 10029	Frederick L. Hellman	H. LePort
4	P.S. 108 Peter Minuit School 1615 Madison Avenue New York, New York 10029	Ralphine Gross	T. Aronson J. Brill E. Perrin S. Weltman
4	P.S. 155 The William Paca School 319 East 117th Street New York, New York 10029	Joseph Strell	S. Leibick B. Roshel
5	P.S. 123 Alexander S. Webb School 301 West 140th Street New York, New York 10030	Linda Linton	L. Basden M. Feinberg R. Marron B. Wallach
5	P.S. 200 2599 Seventh Avenue New York, New York 10039	Joseph Sellers	A. Cooper R. Demirdjian
6	P.S. 192 The Jacob H. Schiff School 500 West 138th Street New York, New York 10031	Joyce Kallir	J. Jones M. Ortiz
8	P.S. 100 Isaac Clason School 800 Taylor Avenue Bronx, New York 10472	Elizabeth Builder	M. Elson M. Hertz A. Trombetta
8	P.S. 107 1695 Seward Avenue Bronx, New York 10472	Philip B. Stein	S. Haber S. Lobel S. Sabsels
8	P.S. 140 Eagle School 916 Eagle Avenue Bronx, New York 10456	Bernard Kaback	R. Kufsky J. Raysman

District	School	Principal	Teacher
9	P.S. 11 The Highbridge School 1257 Ogden Avenue Bronx, New York 10452	Samuel H. Fondiller	M. Brady R. Marino A. Santos
9	P.S. 58 East 176th Street & Washington Avenue Bronx, New York 10457	Ruth Feder	A. Dubitsky E. Feinman Y. Graves
9	P.S. 109 The Sedgwick School 1771 Popham Avenue Bronx, New York 10453	Leonard Loeb	P. Ernst J. Golden D. Hart
15	P.S. 38 The Pacific School 450 Pacific Street B'klyn, New York 11217	Joseph R. Stiles	H. Burbach E. Mancaruso K. Schmitt
15	P.S. 107 The John W. Kimball School 1301 8th Avenue B'klyn, New York 11215	E. Virginia Massimine	M. Anckins W. Calden
15	P.S. 172 The Gowanus School 825 4th Avenue B'klyn, New York 11232	Margaret Cooney	L. Hitter P. Quinlan
17	P.S. 241 The Emma L. Johnston School 976 President Street B'klyn, New York 11225	Arthur Becker	S. Freeman E. Greenberg B. Hollander J. Smith
17	P.S. 316 Classon School 750 Classon Avenue B'klyn, New York 11238	Barney Weiss	D. Dunn A. Kurz N. Solop M. Toback
19	P.S. 63 The Hinsdale School 116 Williams Avenue B'klyn, New York 11207	Jacob Shapiro	J. Bauer S. Morton
19	P.S. 158 The Warwick School 400 Ashford Street B'klyn, New York 11207	Beatrice Conan	A. Axelrud H. Casella M. Latronica

District	School	Principal	Teacher
19	P.S. 190 590 Sheffield Avenue B'klyn, New York 11207	Solomon Liebler	A. Bernbaum M. Cunningham B. Galaga D. Werbitt
19	P.S. 202 982 Hegeman Avenue B'klyn, New York 11207	Abraham Tafler	E. Koob E. Rappaport
21	P.S. 225 1075 Ocean View Avenue B'klyn, New York 11235	Louis Samet	M. Wesson
23	P.S. 150 The Christopher School 364 Sackman Street B'klyn, New York 11212	Nathan Alter	J. Klein M. Rosenberg
23	P.S. 175 The Hopkinson School 226 Bristol Street B'klyn, New York 11212	Abraham Bompey	M. Glazer E. Levy S. Rimler
30	P.S. 111 Jacob Blackwell School 37-15 13th Street Long Island City Queens, New York 11101	Seymour J. Sherman	C. D'Adamo M. Rubin M. Taishoff D. Van Hove
30	P.S. 127 The East Elmhurst School 98th Street & 25th Avenue East Elmhurst, Queens, New York 11369	Abraham Scharf	J. Marshall A. Moersel L. Peterson

APPENDIX C

Data Collection Instruments
Classroom Paraprofessionals

OMNIBUS

A measure of pupil attitudes
toward themselves
and
toward school

OMNIBUS was developed by the Educational Testing Service.

It has been used previously with elementary school pupils.

IED's consultants recommended it over the alternatives as having been carefully developed, tested in use, easy to administer, and straightforward in scoring and interpretation.

OMNIBUS, cont'd	Never or hardly ever	Sometimes	Always or almost always
1. I am sad.	☐	☐	☐
2. I like the way I look.	☐	☐	☐
3. I am happy in school.	☐	☐	☐
4. I worry about things.	☐	☐	☐
5. Many people make me sad.	☐	☐	☐
6. I hate doing school work.	☐	☐	☐
7. School work is interesting.	☐	☐	☐
8. I get tired of school.	☐	☐	☐
9. I like myself.	☐	☐	☐
10. Other people my age are luckier than I am.	☐	☐	☐
11. I try to get out of going to school.	☐	☐	☐
12. I'm afraid other people my age will make fun of me.	☐	☐	☐

OMNIBUS, cont'd	Never or hardly ever	Sometimes	Always or almost always
13. I like to try doing new things.	☐	☐	☐
14. I do what my teacher asks.	☐	☐	☐
15. I like being in school.	☐	☐	☐
16. I am unhappy with myself.	☐	☐	☐
17. School is a waste of time.	☐	☐	☐
18. I try to help other people my age at school.	☐	☐	☐
19. I do things well.	☐	☐	☐
20. I try to do well in my school work.	☐	☐	☐
21. I'm a good person in school.	☐	☐	☐
22. People my age are nice in school.	☐	☐	☐
23. I want to learn a lot.	☐	☐	☐
24. I feel that people I know like me.	☐	☐	☐

PICTURES

A measure of pupil attitudes
toward reading, arithmetic,
and other school subjects

PICTURES was developed by the Instructional Objectives Exchange, a nonprofit educational corporation established in 1968 by the UCLA Center for the Study of Evaluation to serve as a collection point, clearinghouse, and instrument development agency.

It has been used previously with elementary school pupils.

IED's consultants recommended it as a supplement to OMNIBUS since it gathers pupil attitudes toward specific school subjects, including reading and arithmetic, the two subjects in which paraprofessional work is concentrated in the elementary schools of New York City. Moreover, it requires no reading by the pupils and thus offers no response barrier, a special problem with the disadvantaged pupils for whom it has been used by IED.

A PICTURE CHOICE

Primary Level (Grades 2-3)

Directions (to be read aloud): On your paper you will see that in each row there are three pictures. Each picture is about something you might do in school. I will tell you what is happening in each picture. Then you will put an X over one of the pictures to show which of the three things *you* would *most* like to do.

1.	Spell some words	Paint pictures	Count numerals
2.	Sing a song	Tell a story	Tell time
3.	Color a book	Read a book	Write a story
4.	Read labels on cans	Color tin cans	Fit little cans inside big ones
5.	Use names of animals for a spelling contest	Find out if animals fed milk get fatter than animals fed only water	Find a way to tell how fat an animal is
6.	Make a picture that looks like a cow	Make a picture that shows how you feel about a cow	Read about a cow
7.	Make music with sticks	Read what somebody wrote about sticks	Find out what sticks are made of
8.	Draw a fish that never was	Listen to a story about fish	Write about a fish
9.	See which trees have smooth bark	Read about woodchoppers	Guess how many chops will bring down a big tree
10.	Make something from clay	Find out where clay comes from	Give each child the same amount of clay
11.	Tell what size the next bean would be in a row of beans	Play a rhythm instrument with beans	Read a story about magic beans
12.	Listen to a story about a teapot	Sing a song about a teapot	See how the teapot makes steam

PICTURES, cont'd

13. Read about transportation	Listen to a story about transportation	See why some transportation has 2 wheels, others 3 or 4
14. Be the one to tell how many days until Christmas	Paint a picture that shows how you feel about Christmas	Write about Christmas to a friend
15. Find out why popcorn pops	Read about the first popcorn	Measure oil and popcorn for popping
16. Use marbles to spell words	See what happens when marbles are heated	Play a counting game using marbles
17. Play a song on a rubber band guitar	Find out why a rubber band stretches	Make designs on a nail board with rubber bands
18. Sing a song making the sound of a train	Find out what makes a train move	Count the cars as the train goes by
19. Count how many planes go up and how many land at the airport	Read a story about a pilot	Find out what the wind does to airplanes
20. Tell a story about a turtle	Read a story about a turtle	Discover what food the turtle likes to eat
21. Listen to a story about a boy and his shadow	Find out why we can see our shadow	Find ways to see how long our shadow is
22. Write a letter	Read a letter	Listen to a flute
23. Read about making dough	Measure dough	See what happens when more flour is added to dough
24. See what things a magnet will pick up	Listen to a story about a magnet	Read about magnets
25. Read the signs in a classroom store	Count the money at the classroom store	Tell everybody there is a new store in the class
26. Write about painting with sponges	Read about how much water different sponges hold	Watch how a sponge is born and grows
27. Tell your class about making something with cotton	Sing with other children	Read a story about picking cotton

PICTURES, cont'd

28. Learn to play a tune on a piano	Find out how pianos make different sounds	Find out how many black keys there are to each white key on a piano
29. See what happens when you put water on a pine cone	Read about pine cones	Count out the same number of pine cones for each child
30. Figure out how long it will take to get to a city	Spell the name of a city	Read about a city

PICTURES, cont'd

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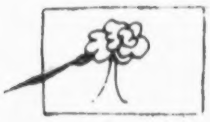

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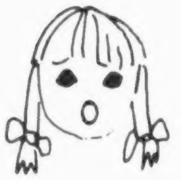

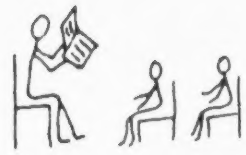

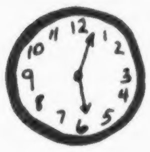

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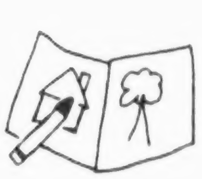

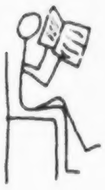

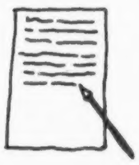

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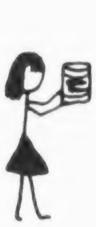

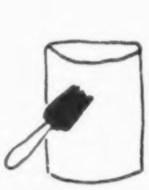

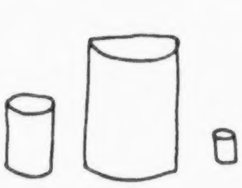

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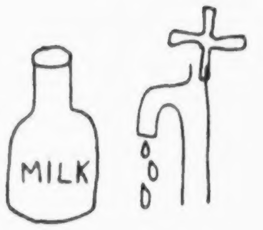

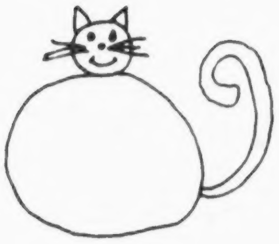

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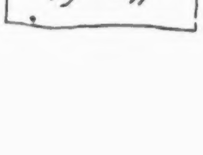

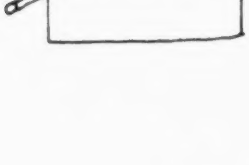

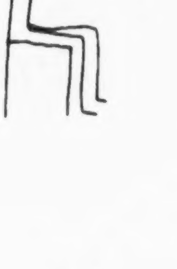

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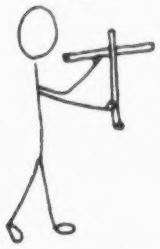

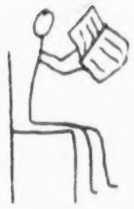

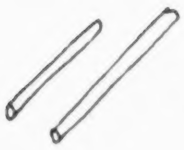

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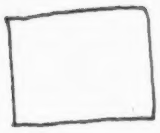

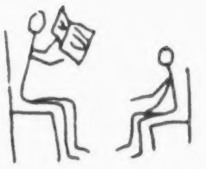

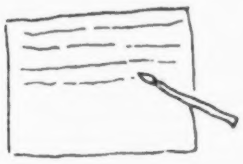

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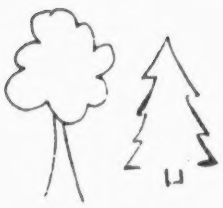

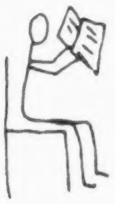

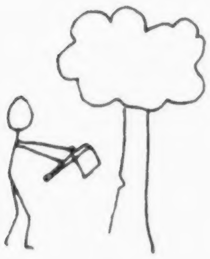

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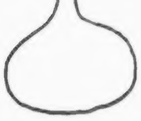

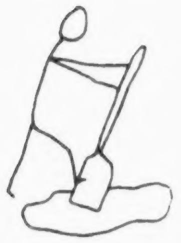

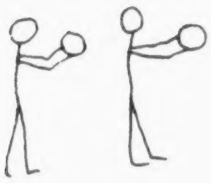

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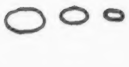

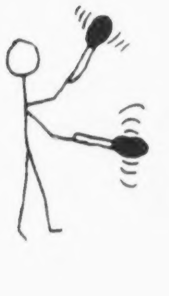

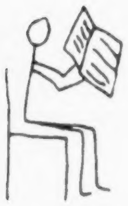

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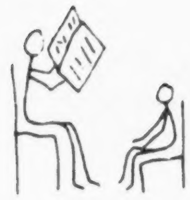

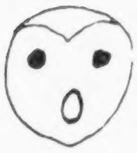

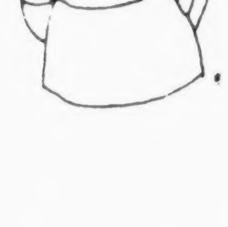

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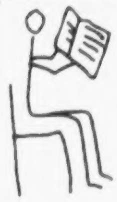

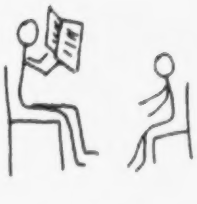

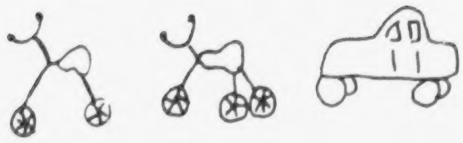

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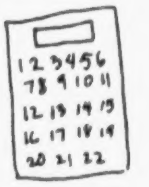
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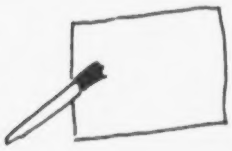

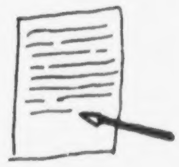

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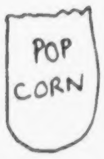

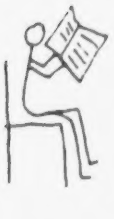

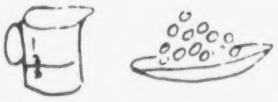

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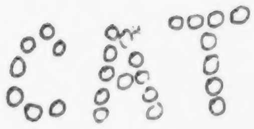

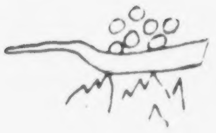

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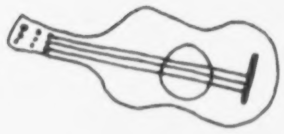

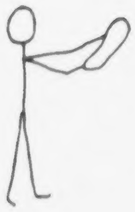

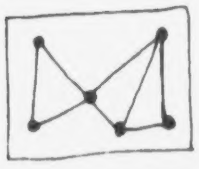

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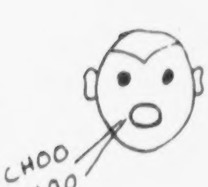

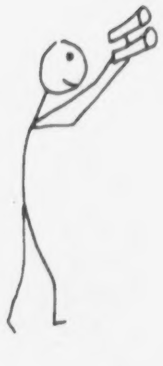

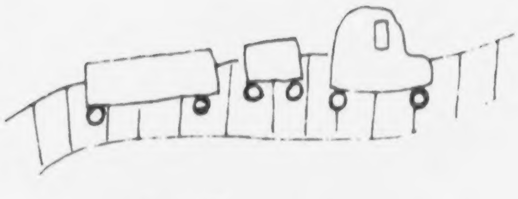

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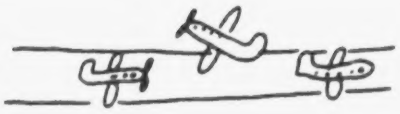
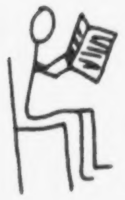
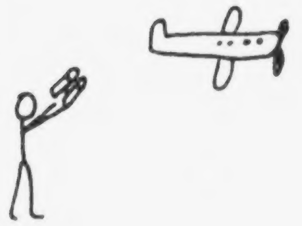

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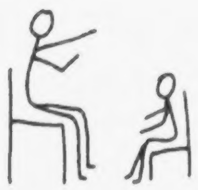
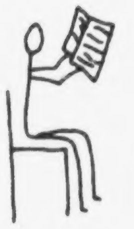
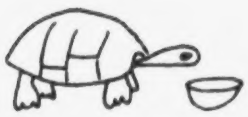

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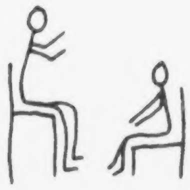
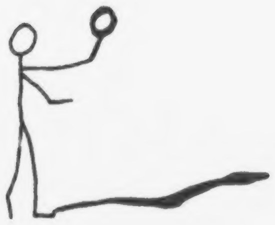
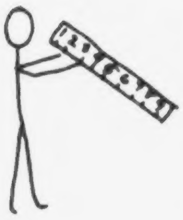

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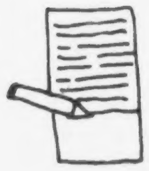
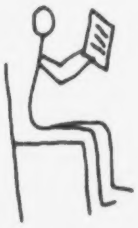
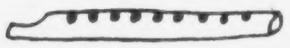

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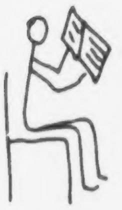
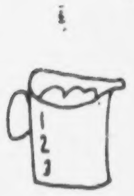

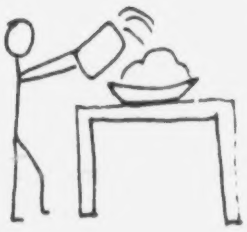

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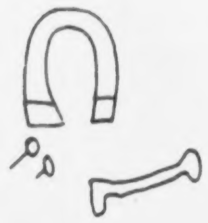
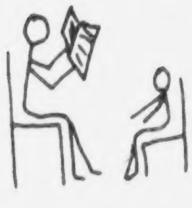
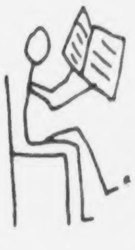

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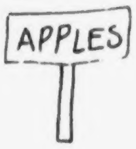

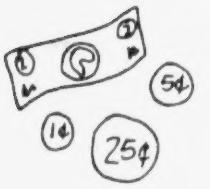

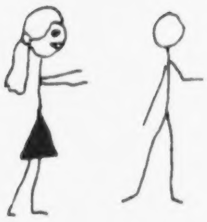

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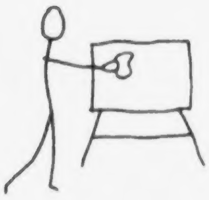
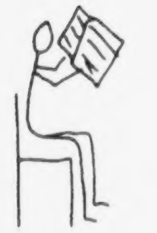
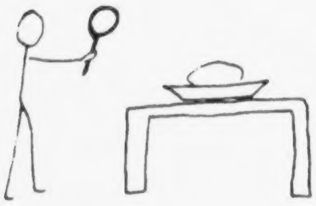

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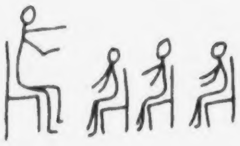
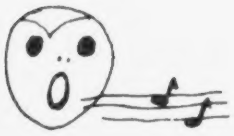
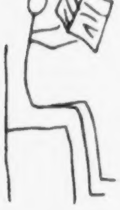

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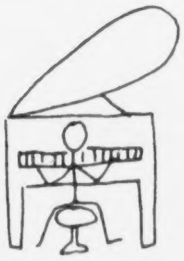
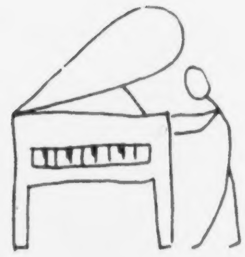
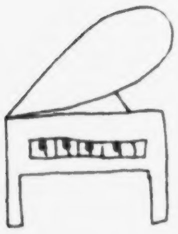

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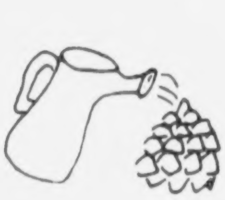
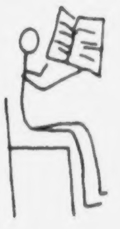
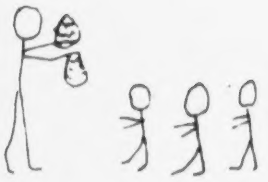

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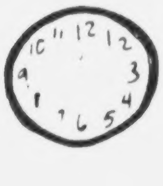
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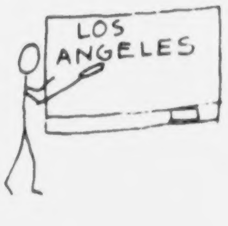
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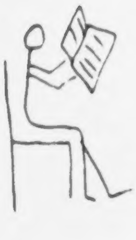

CATEGORIES IN THE AMIDON EXPANDED INTERACTION ANALYSIS SYSTEM

TEACHER TALK	INDIRECT INFLUENCE	1. ACCEPTS STUDENT FEELINGS Acknowledges feelings Clarifies feelings Refers to similar feelings of others
		2. PRAISES Without criteria With public criteria With private criteria
		3. ACCEPTS STUDENT IDEAS Acknowledges ideas Clarifies ideas Summarizes ideas
		4. ASKS QUESTIONS Factual question Convergent question Divergent question Evaluative question

TEACHER TALK	DIRECT INFLUENCE	5. LECTURES Factual lecture Motivational lecture Orientation lecture Personal opinions
		6. GIVES DIRECTIONS Cognitive directions Managerial directions
		7. CRITICIZES Without criteria With public criteria With private criteria

STUDENT TALK

8. STUDENT TALK - PREDICTABLE

Factual response
Convergent response

9. STUDENT TALK - UNPREDICTABLE

Divergent response
Evaluative response
Student-initiated talk

NO TALK

10. SILENCE OR CONFUSION*

Silence
Confusion

*10. Without a subcategory letter indicates:
-a change of speakers in student-to-student interaction
-the beginning and end of a coding sequence in Matrix construction

READING TEXTBOOK BEHAVIORS *

	Teacher Uses			Paraprofessional Uses		
	1	2	3	1	2	3
1. Teacher has children read orally.						
2. Teacher has children read silently.						
3. Teacher reads aloud.						
4. Teacher groups children according to reading ability.						
5. Teacher writes questions, words, or directions on chalkboard.						
6. Teacher holds individual conferences or provides remedial help during reading class.						
7. Teacher plays learning games to review phonetic, structural, or other reading principles.						
8. Teacher plans related speech experiences in social situations, e.g., story-telling, giving reports, debating, choral reading, dramatic presentations.						
9. Teacher encourages or directs pupils to help one another.						
10. Teacher demands answers requiring conclusions or judgments on pupils' part.						
11. Teacher uses related language experiences, such as writing letters, forming class newspaper, using the school library.						
12. Teacher asks questions to test pupil comprehension of reading material.						
13. Teacher helps pupils to figure out how to pronounce new words.						
14. Teacher helps pupils to understand the meaning of new words.						
15. Teacher does not tell pupils what the meaning of new words are, but encourages them to figure them out for themselves.						
16. Teacher guides pupils to select or identify the main point or idea of a story.						

* Key

1. Uses frequently
2. Uses occasionally
3. Uses rarely, but at least once

ARITHMETIC TEXTBOOK BEHAVIORS

	Teacher Uses			Paraprofessional Uses		
	1	2	3	1	2	3
1. Teacher groups children according to mathematical ability.						
2. Teacher has pupils compare events from their daily life to problems they are studying, thus relating what they have read to their own experiences.						
3. Teacher uses a variety of tangible objects (pegs, chairs, the pupils themselves, Cuisinaire rods, abacuses, etc.) to lead pupils in the identification and use of mathematical relationships (multiplication, sets, time, distance, curves, etc.)						
4. Teacher uses a variety of representative objects (pictures, diagrams, number line, charts, etc.) to lead pupils in the identification and use of mathematical relationships.						
5. Teacher uses pupil's previous knowledge as a basis for helping pupils understand new information.						
6. Teacher leads pupils to present and support alternative solutions for a single problem.						
7. Teacher introduces and explains the terms and vocabulary that go with new material after the class has grasped the ideas being presented.						
8. Teacher writes equations, numbers, or diagrams on the chalkboard.						
9. Teacher leads pupils in the playing of mathematical games for such purposes as problem-solving and drill.						
10. Teacher guides pupils in written practice exercises, either in a workbook or on paper.						
11. Teacher incorporates historical information or examples related to math into the lesson.						
12. Teacher works with individual pupils on specific problems or projects.						
13. Teacher directs or encourages pupils to help one another.						

* Key
1. Uses frequently
2. Uses occasionally
3. Uses rarely, but at least once

MEDIA CHECKLIST

MEDIA	TEACHER USES	PARAPROFESSIONAL USES (where appl.)	PUPIL USES
I. Books & Printed Matter (other than reference)			
Trade books			
Textbooks			
Programmed books, printed programs, teaching machines			
Workbooks			
Work sheets and outline maps			
Reading kits			
Pamphlets			
Periodicals			
Newspapers and clippings			
Pictures in books and magazines			
Other (please explain)			
II. Reference Books			
Dictionary			
Atlas			
Encyclopedias			
Almanacs			
Catalogues			
Manuals			
Courses of study			
Units of study			
Other (please explain)			
III. Tests			
Practice tests			
Standardized tests			
Teacher-made tests			
Textbook tests			
Other (please explain)			

MEDIA	TEACHER USES	PARAPROFESSIONAL USES (where appl.)	PUPIL USES
IV. Contentless Media			
Construction paper			
Drawing paper			
Writing paper			
Paints			
Crayons and chalks			
Pencils and pens - drawing			
Pencils and pens - writing			
Clay and artificial clays			
Others (please explain)			
V. Flat Graphics			
Charts - prepared, emerging			
Posters			
Pictures (unbound, not projected)			
Pupil's own pictures			
Diagrams			
Wall maps			
Letter sets			
Chalkboard - wall, easel			
Bulletin board			
Flannelboard, magnetic board			
Other (please explain)			
VI. Three Dimensional Media			
Globes			
Models, mock-ups			
Demonstration apparatus			
Laboratory equipment			
Dioramas and sand tray			
Realia, household objects			
Toys, games, puppets			
Sculpture, mobiles, stabiles			
Other (please explain)			

MEDIA	TEACHER USES	PARAPROFESSIONAL USES (where appl.)	PUPIL USES
VII. Sound			
Voice - live, speaking			
Voice - live, singing or chanting			
Musical Instruments - live			
Records and record player			
Language labs			
Earphones, loud speakers			
Radio - commercial, educational			
Tapes and tape recorders - prepared, emerging, programmed			
P.A. system			
Other (please explain)			
VIII. Visuals - Mechanical			
Opaque projector			
Filmstrip projector			
Slide projector			
Movie projector - silent			
Overhead projector - prepared transparency, emerging			
Filmstrip viewer			
Slide viewer			
Rear screen projector			
Micro projector			
Other (please explain)			
IX. Audio-Visuals			
Television - closed-circuit, educational, commercial			
Sound movie			
Filmstrip with synchronized sound			
Other			
X. Screens			
Projection screens - wall, movable, overhead			
Walls - movable			
Other			

TALLY SHEET

FOR RECORDING THE AMIDON EXPANDED INTERACTION BEHAVIORS AND GROUPING

1.______ T G I *
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98.______ T G I
99.______ T G I
100.______ T G I

* For each behavior recorded, indicate whether it is performed with the "Total" Class (T), a "Group" (G), fewer in number than the total class, or an "Individual" (I).

INSTRUCTION TIME

1. How much instruction time is the teacher or paraprofessional allocating today to the subject you have just observed:

   ____________ Minutes

2. How much instruction time did she devote to this subject yesterday (or the last school day)?

   ____________ Minutes

3. How many instructional hours (estimate) does she spend on this subject on the average in a standard school week?

   ____________ Hours

Observer Comments

Record below any comments which you deem pertinent about this observation or classroom.

STUDENT INFORMATION ON PRECEDING OBSERVATION

1. List below the names and code numbers (using classroom roster) of those students attended to by the adult you just observed.
2. If total class is involved, record "Total Class."

	Student's Name	Code Number
e.g. 1.	John A. Doe	10-133-1-02
2.	Total Class	10-133-1

TEACHER'S REPORT FORM
CONFIDENTIAL REPORT FOR USE BY EVALUATION AGENCY ONLY

Part A Student Information

STUDENT NAME	SEX		ETHNICITY						ATTENDANCE	TEACHER JUDGMENT OF STUDENT'S POTENTIAL FOR ACADEMIC SUCCESS IN SCHOOL		
	F	M	Black	Oriental	Puerto Rican	White	Span. Surname not Puerto Rican	Other	Number of days absent from school from 9/14/70 through 4/30/71 (Include ½ days; for example, 4½ days).	Please make your assessment of each student in consideration of characteristics and abilities such as: previous school success, interest in school work, self-confidence, emotional ability, etc.		
										High	Average	Poor
01												
02												
03												
04												
05												
06												
07												
08												
09												
10												
11												
12												
13												
14												
15												

Part B Teacher Information

1. Age

Under 20 ____
20-24 ____
25-29 ____
30-34 ____
35-39 ____
40-44 ____
45-49 ____
50-59 ____
60 yrs or more ____

2. Highest Level of Education Completed

Less than four years of college ____

Four years of college with a degree ____ Degree ____ Major ____

Some years of graduate study, no degree at present ____ Approximately how many credits have you accumulated? ____

Graduate study with a degree ____ Degree ____ Major ____

Other ____

3. How many years have you been teaching school? (Please include this year and any years you may have taught as a regular substitute.) ____

4. How many of these teaching years were spent in: Number of Years

An urban school system ____

A suburban school system or small town school system ____

A rural school system ____

5. How many years have you spent teaching in each of the following grades?

Pre-kindergarten ____
Kindergarten ____
1 ____
2 ____
3 ____
4 ____
5 ____
6 ____
7 ____
8 ____
9th grade or beyond ____

Part C Auxiliary Personnel Information

6a. Please list below the titles of adults who may provide assistance in your classroom, such as student teachers, cluster teachers, and urban corps teachers. If you happen to have more than one person for a given role, list each one individually.

If you are working with a regular classroom paraprofessional, please list this aide and any other paraprofessional who may spend time with the parents of your students such as family assistants.*

If your aide no longer assists you, please include the month this assistance terminated in Column B.

A	B	C				
TITLE OF ADULT AIDE	WHAT MONTH DID THE AIDE BEGIN WORKING IN YOUR CLASSROOM?	APPROXIMATELY HOW MANY HOURS DOES THIS AIDE SPEND WORKING IN YOUR CLASSROOM DURING A TYPICAL FIVE-DAY SCHOOL WEEK?				
		Less than 5 hrs.	5-10 hrs.	11-15 hrs.	16-20 hrs.	More than 20 hrs.
1.						
2.						
3.						
4.						
5.						
6.						

b. Please check (✓) the adults listed above who aid during instruction periods in reading.

c. Please star (✱) the adults listed above who aid during instruction periods in arithmetic.

* If you list a paraprofessional who works primarily outside of your classroom, such as a "family assistant," in Column B record the month her assistance began for a student or his family and in Column C approximate the amount of attention given.

7. Judging from your experiences, observations or what you have heard about paraprofessionals who work in the schools, how would you assess their overall effect on students' education?

Excellent _____ Fair _____ Very Poor _____

Good _____ Poor _____ Limited knowledge - I can't say_____

IF YOU HAVE A PARAPROFESSIONAL WORKING IN YOUR CLASSROOM NOW, PLEASE ANSWER QUESTIONS 8, 9, 10 and 11.

8. What effect would you say the paraprofessional in your classroom has had on student performance in reading and arithmetic? If your paraprofessional has only worked with a few children in academic subjects, judge her effect for these children only.

Excellent _____ Fair _____ Very Poor _____

Good _____ Poor _____

9. Do you want a paraprofessional assigned to your classroom next year?

Yes _____ No _____ Willing _____ Uncertain _____

10. Would you request the paraprofessional you now have working in your classroom?

Yes _____ No _____ Willing _____ Uncertain _____

11. Does your classroom paraprofessional work with specific students in the areas of reading and arithmetic? If so, please list below the names of these students, the month assistance began, and check the amount of time the paraprofessional has spent with them. For additional space, please use opposite side of this paper.

STUDENT NAME	WHAT MONTH DID THE PARAPROFESSIONAL BEGIN WORKING WITH THE CHILD?		IN A TYPICAL FIVE-DAY SCHOOL WEEK, HOW MANY HOURS DID THE PARAPROFESSIONAL SPEND WITH THIS CHILD?										
	Reading	Arith.	Reading						Arithmetic				
			Less than 5 hrs.	5-10 hrs.	11-15 hrs.	16-20 hrs.	More than 20 hrs.		Less than 5 hrs.	5-10 hrs.	11-15 hrs.	16-20 hrs.	More than 20 hrs.

IF YOU DID NOT HAVE A PARAPROFESSIONAL IN YOUR CLASSROOM, PLEASE ANSWER QUESTIONS 12 and 13.

12. If you had had a paraprofessional in your classroom this year, which students would you have assigned to her for help in reading and/or arithmetic?

STUDENT NAME	AREA	
	Reading	Arithmetic

13. Would you like a paraprofessional assigned to your classroom next year?

Yes _____ No _____ Willing _____ Uncertain _____

INSTITUTE FOR EDUCATIONAL DEVELOPMENT
52 Vanderbilt Avenue
New York, New York 10017

BACKGROUND INFORMATION ON PARAPROFESSIONALS IN THE NEW YORK CITY SCHOOLS

Directions for Answering the Questionnaire

1. The purpose of this questionnaire is to gather background information on paraprofessionals. The answers you give can help the study determine whether or not paraprofessionals with certain backgrounds and experiences are being used in the best possible way. For example, it may be that some paraprofessionals should be moved into assignments which make better use of the knowledge and experiences they bring to the job.

2. Read each question carefully. There are no right or wrong answers. Just check the response which best answers the question for you.

   Sample Question: What sex are you?

   Male ☑ 80-1

   Female ☐ -2

   If you are a male, you would check the first box as we have shown here. Of course, if you are a female, you would check the "second" box rather than the "first." The numbers next to the boxes are for data processing. Please ignore them.

3. When you have completed the questionnaire, return it to the Institute for Educational Development in the stamped, pre-addressed envelope which we have enclosed. Before you send it back, you may remove the label with your name. The envelope and your name label will be discarded in any case once it reaches our office.

4. We would appreciate the return of the questionnaire as soon as possible. Please, not later than May 1, 1971. If you have any questions, please contact Mrs, Aslanian at 686-8910.

Thank you for your cooperation.

Return to:

Mrs. Carol Aslanian
Institute for Educational Development
52 Vanderbilt Avenue
New York, New York 10017

5-1

BACKGROUND INFORMATION ON PARAPROFESSIONALS IN THE NEW YORK CITY SCHOOLS

1. What is your age?

Under 20	☐ 6-1	**30-34**	☐ -4	**45-49**	☐ -7
20-24	☐ -2	**35-39**	☐ -5	**50-59**	☐ -8
25-29	☐ -3	**40-44**	☐ -6	**60 years or more**	☐ -9

2. What sex are you? **Male** ☐ 7-1 **Female** ☐ -2

3. What is your marital status?

Single	☐ 8-1	**Widowed**	☐ -4
Married	☐ -2	**Divorced**	☐ -5
Separated	☐ -3		

4. Where is your place of birth?

9-1 ☐ **New York City**

-2 ☐ **Within 100 miles of New York City (a nearby suburb)**

-3 ☐ **More than 100 miles from New York City limits**

If more than 100 miles from New York City, please check where:

10-1 ☐ **Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, or Vermont**

-2 ☐ **Delaware, District of Columbia, Maryland, New Jersey, New York, or Pennsylvania**

-3 ☐ **Illinois, Indiana, Michigan, Minnesota, Ohio, or Wisconsin**

-4 ☐ **Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, or West Virginia**

-5 ☐ **Some other state not listed above**

-6 ☐ **Territories of the United States such as Puerto Rico or the Virgin Islands**

-7 ☐ **Other country (please specify)** ______________________

5. Where did you spend most of your years up to age 16?

On a farm ☐ 11-1

In a small country town ☐ -2

In a large town ☐ -3

In the suburbs of a major city ☐ -4

In a major city ☐ -5

In an urban ghetto ☐ -6

6. How many years have you lived in New York City?

Less than 1 year ☐ 12-1

1-2 years ☐ -2

3-4 years ☐ -3

5-6 years ☐ -4

7-8 years ☐ -5

9-10 years ☐ -6

11-15 years ☐ -7

More than 15 years ☐ -8

7. In which of these categories do you consider yourself?

American Indian ☐ 13-1

Black ☐ -2

Oriental ☐ -3

Puerto Rican ☐ -4

Spanish surname (but not Puerto Rican) ☐ -5

White ☐ -6

Other ☐ -7

8. Are you the head of your household? **Yes** ☐ 14-1 **No** ☐ -2

9. How many children do you have?

None ☐ 15-1

1 ☐ -2

2 ☐ -3

3 ☐ -4

4 ☐ -5

5 ☐ -6

6 or more ☐ -7

10. Do you have children of your own, children of relatives, or foster children living with you now?

Yes ☐ 16-1 **No** ☐ -2

IF YOUR ANSWER TO QUESTION 10 WAS "YES," PLEASE ANSWER QUESTIONS 11, 12, 13, and 14

11. How many such children 4 years of age and younger do you have living with you now?

None ☐ 17-1
1 ☐ -2
2 ☐ -3
3 ☐ -4
4 ☐ -5
5 ☐ -6
6 or more ☐ -7

12. How many such children from 5 through 12 years of age do you have living with you now?

None ☐ 18-1
1 ☐ -2
2 ☐ -3
3 ☐ -4
4 ☐ -5
5 ☐ -6
6 or more ☐ -7

13. How many such children from 13 through 18 years of age do you have living with you now?

None ☐ 19-1
1 ☐ -2
2 ☐ -3
3 ☐ -4
4 ☐ -5
5 ☐ -6
6 or more ☐ -7

14. How many young people 19 years of age or older do you have living with you now?

None ☐ 20-1
1 ☐ -2
2 ☐ -3
3 ☐ -4
4 ☐ -5
5 ☐ -6
6 or more ☐ -7

15. How much do you expect your total family income will be in 1970?

Less than $3,000 ☐ 21-1
$3,000-4,999 ☐ -2
$5,000-6,999 ☐ -3
$ 7,000 - 8,999 ☐ -4
$ 9,000-11,999 ☐ -5
$12,000-14,999 ☐ -6
$15,000 or more ☐ -7

16. How many people are living in your household (including adults and children)?

Total ☐ 22-

17. How many people in your household are dependent on your total family income (As answered in question 15)?

1 ☐ 23-1
2 ☐ -2
3 ☐ -3
4 ☐ -4
5 ☐ -5
6 ☐ -6
7 ☐ -7
8 or more ☐ -8

18. Please check the proportion of money your household expects to receive in 1970 from each category.

PLEASE CHECK

	None -1	Less than half -2	About half -3	More than half -4	Nearly all -5	All -6	
Your wages as a paraprofessional	☐	☐	☐	☐	☐	☐	24
Your wages in any other job	☐	☐	☐	☐	☐	☐	25
All other household members' wages	☐	☐	☐	☐	☐	☐	26
Unemployment compensation	☐	☐	☐	☐	☐	☐	27
Public Assistance	☐	☐	☐	☐	☐	☐	28
Any disability payments	☐	☐	☐	☐	☐	☐	29
Social Security Benefits	☐	☐	☐	☐	☐	☐	30
Other sources	☐	☐	☐	☐	☐	☐	31

19. Do you have a high school diploma or its equivalent?

Yes ☐ 32-1 **No** ☐ -2

20. Which of the following categories best describes the highest level of education you have completed?

Elementary School

- **Some grades** ☐ 33-1
- **8th grade** ☐ -2

High School

- **9th grade** ☐ -3
- **10th grade** ☐ -4
- **11th grade** ☐ -5
- **12th grade** ☐ -6

College

- **1 year** ☐ -7
- **2 years** ☐ -8
- **3 years** ☐ -9
- **4 years** ☐ -10
- **5 years or more** ☐ -11

21. List the different jobs or occupations you had before becoming a paraprofessional (or school aide). Please begin with your most recent job. Also, put down the number of years you worked in each of these jobs.

	JOB	NUMBER OF YEARS	
Example:	Salesclerk	2	
			-34
			-35
			-36
			-37
			-38
			-39
			-40
			-41

☐☐ 42-43

22. At present, do you have another job in addition to your work as a paraprofessional?

Yes ☐ 44-1 **No** ☐ -2

If you do, what is the job?______________________________________ 45-

23. Before you became a paraprofessional, did you ever participate in a professional or vocational training program? For example, training in high school, on the job, in nursing, in a trade, in a technical institute, or in an Armed Forces school? **Yes** ☐ 46-1 **No** ☐ -2

If you have, what was the main area of such training?

Business ☐ 47-1
Office Work ☐ -2
Nursing ☐ -3
Other Health Fields ☐ -4
Trades and Crafts ☐ -5
Agriculture or home economics ☐ -6
Community and civic activities ☐ -7
Other (describe)____________________ ☐ -8

24. Please list by name the organizations, clubs, associations, community and civic organizations, and other groups to which you belong or volunteer your service. (For example, NAACP, Bowling League, Neighborhood Community Center, Local School Board, School Parents Association, CAP.)

☐ 48-49

____ 50-

____ 51-

____ 52-

____ 53-

____ 54-

____ 55-

25. In how many school programs do you work as a professional?

1 ☐ 56-1

2 ☐ -2

3 or more ☐ -3

MOST PARAPROFESSIONALS WORK IN ONE PROGRAM. BUT, IF YOU WORK IN MORE THAN ONE PROGRAM, ANSWER QUESTIONS 26 through 35 (STARRED ITEMS) ONLY FOR THE ONE PROGRAM ON WHICH YOU SPEND MOST OF YOUR TIME.

*26. What is the funding source of the project in which you are acting as a paraprofessional?

Federal Government ESEA-Title I ☐ 57-1

New York State Urban Education ☐ -2

Other (describe) ________ ☐ -3

____

Unsure ☐ -4

*27. What is the exact title of your present position as a paraprofessional?

Auxiliary Trainer ☐ 58-1

Educational Assistant ☐ -2

Educational Associate ☐ -3

Family Assistant ☐ -4

Family Worker ☐ -5

Parent Program Assistant ☐ -6

School Aide ☐ -7

Student Aide ☐ -8

Teacher Aide ☐ -9

Other (describe) ________ ☐ -10

____

*28. Is the project in which you are a paraprofessional an Open Enrollment Project?

Yes ☐ 59-1

No ☐ -2

Unsure ☐ -3

*29. What kind of school do you work in?

High school ☐ 60-1

Vocational school ☐ -2

Junior High and Intermediate school ☐ -3

Elementary ☐ -4

Occupational Training Center ☐ 5

"400" ☐ -6

"600" ☐ -7

Other (describe) ________ ☐ -8

____

*30. What is the name and number of the school in which you are working as a paraprofessional?

________________ ____
Name and Number 61 - 63

*31. In which district is this school located (Please write in the number or name)?

District ________________ ____
64 - 65

*32. In which Borough is this school located?

Manhattan ☐ 66-1
Bronx ☐ -2
Brooklyn ☐ -3
Queens ☐ -4
Staten Island (Richmond) ☐ -5

*33. Do you live in the school district in which you are working as a paraprofessional?

Yes ☐ 67-1
No ☐ -2

*34. About how many hours do you work as a paraprofessional in a typical week?

10 hours or less ☐ 68-1
11-15 hours ☐ -2
16-20 hours ☐ -3
21-25 hours ☐ -4
26-30 hours ☐ -5
31-35 hours ☐ -6
36-40 hours ☐ -7
More than 40 hours ☐ -8

*35. Considering the students or parents with whom you come in contact most in your role as a paraprofessional, please check the amount of time you work with each of the following groups.

PLEASE CHECK

	None of the time	Some of the time	About half the time	Most of the time	All of the time	
	-1	-2	-3	-4	-5	
Black	☐	☐	☐	☐	☐	69
Oriental	☐	☐	☐	☐	☐	70
Puerto Rican	☐	☐	☐	☐	☐	71
White	☐	☐	☐	☐	☐	72
Other	☐	☐	☐	☐	☐	73

OUR SINCERE THANKS FOR YOUR PARTICIPATION

PLEASE RETURN THE STAMPED PRE-ADDRESSED ENVELOPE ENCLOSED TO:

Mrs. Carol Aslanian
Institute for Educational Development
52 Vanderbilt Avenue
New York, New York 10017

Institute for Educational Development
June 5, 1970
Project 4317 -70

(IED) INSTITUTE FOR EDUCATIONAL DEVELOPMENT
52 Vanderbilt Avenue
New York, New York 10017

JOB DESCRIPTIONS FOR PARAPROFESSIONALS

IN THE NEW YORK CITY SCHOOLS

Directions for Answering the Questionnaire

This is the second questionnaire in our study of paraprofessionals employed in the district decentralized State Urban Education and ESEA Title 1 projects in the New York City Schools. It has been designed to give a more accurate picture of what is involved in your job as a paraprofessional.

The questionnaire has been divided into two sections. Section A deals with general questions about your job: your job training, where you work, with whom you work, etc. Section B is designed to find out more exactly what you do on your job.

When you have completed the questionnaire, return it to the Institute for Educational Development in the stamped, pre-addressed envelope which we have enclosed. Before you send it back, you may remove the label with your name. The envolope and your name label will be discarded, in any case, once it reaches our office.

We would appreciate the return of the questionnaire as soon as possible. Please, not later than May 1,1971. If you have any questions, please contact Mrs. Aslanian at 686-8910.

Thank you for your cooperation.

Return to:
Mrs. Carol Aslanian
Institute for Educational Development
52 Vanderbilt Avenue
New York, New York 10017

5-2

JOB DESCRIPTIONS FOR PARAPROFESSIONALS IN THE NEW YORK CITY SCHOOLS

SECTION A

Directions:

Read each question carefully. There are no right or wrong answers. Just check the response which best answers the question for you. The numbers next to the boxes are for data processing. Please ignore them.

YOUR JOB HISTORY AND TRAINING

1. What is the exact title of your present position as a paraprofessional?

Auxiliary Trainer ☐ 6-1
Educational Assistant ☐ -2
Educational Associate ☐ -3
Family Assistant ☐ -4
Family Worker ☐ -5
Parent Program Assistant ☐ -6
School Aide ☐ -7
Student Aide ☐ -8
Teacher Aide ☐ -9
Other (Please specify) ☐ -0
____

2. How many years have you worked as a PARAPROFESSIONAL (not a school aide) in the New York City school system (including this year)?

This Is My First Year ☐ 7-1
This Is My Second Year ☐ -2
This Is My Third Year ☐ -3
This Is My Fourth Year ☐ -4
This Is My Fifth Year ☐ -5

3. In the spaces below please list the paraprofessional job title or titles you have had, beginning with your present title. Please list only the titles given in question 1 above. DO NOT LIST YOUR YEARS AS A "SCHOOL AIDE".

YEARS	DID YOU RECEIVE ANY TRAINING IN THIS JOB?
1969-1970____________________ (Present title)	Yes ☐ 8-1 No ☐ -2
1968-1969____________________	Yes ☐ 9-1 No ☐ -2
1967-1968____________________	Yes ☐ 10-1 No ☐ -2
1966-1967____________________	Yes ☐ 11-1 No ☐ -2
1965-1966____________________	Yes ☐ 12-1 No ☐ -2

IF YOU HAVE RECEIVED OR ARE RECEIVING TRAINING FOR YOUR PRESENT PARAPROFESSIONAL JOB, PLEASE ANSWER QUESTIONS #4, #5, #6, and #7.

IF YOU HAVE NOT RECEIVED ANY TRAINING FOR YOUR PRESENT PARAPROFESSIONAL JOB, PLEASE GO TO QUESTION #8.

4. What type of training took place, and when? Please answer both A and B.

	No Training	Part-time Training	Full-time Training
A. Before the Job Began (Pre-Service Training)	☐ 13-1	☐ -2	☐ -3
B. While on the Job (In-Service Training)	☐ 14-1	☐ -2	☐ -3

5. Up to now, how much training have you received for your present job? Please answer for A, B, and C.

	No Training	Less Than 1 Week	1-2 Weeks	3-4 Weeks	More Than Five Weeks
A. Part-time Training Before the Job Began	☐ 15-1	☐ -2	☐ -3	☐ -4	☐ -5
B. Full-time Training Before the Job Began	☐ 16-1	☐ -2	☐ -3	☐ -4	☐ -5
C. Part-time Training While on the Job	☐ 17-1	☐ -2	☐ -3	☐ -4	☐ -5

6. Is your training still going on?

Yes ☐ 18-1 No ☐ -2

7. Does this training give you instruction in any of the following?

	Yes	No
1. Orientation to the School	☐ 19-1	☐ -2
2. Child Development	☐ 20-1	☐ -2
3. How Children Learn	☐ 21-1	☐ -2
4. Operation of Audio-visual Equipment	☐ 22-1	☐ -2
5. Making Instructional Materials	☐ 23-1	☐ -2
6. Helping Parents	☐ 24-1	☐ -2
7. Other (Please specify)	☐ 25-1	☐ -2

____

8. AT THE PRESENT TIME, what school or college courses are you taking? Please include those courses taken in the training program you just described, in addition to those courses you may be taking on your own.

a. I Am Not Taking Any Courses ☐ 26-1

		I Am Taking These Courses in My Paraprofessional Training Program	I Am Taking These Courses on My Own
b.	I Am Taking High School Equivalency Courses	☐ 27-1	☐ -2
c.	I Am Taking College Courses (Please give titles) ________________ ________________ ________________ ________________ ________________	☐ 28-1	☐ -2
d.	I Am Taking Adult Education Courses (Please give titles) ________________ ________________ ________________ ________________ ________________	☐ 29-1	☐ -2
e.	I Am Taking Other Courses (Please give titles) ________________ ________________ ________________ ________________ ________________	☐ 30-1	☐ -2

9. a. Were you ever a SCHOOL AIDE (not a paraprofessional) in the New York City school system?

Yes ☐ 31-1 No ☐ -2

b. If "Yes" how many years were you a school aide?

One Year ☐ 32-1
Two Years ☐ -2
Three Years ☐ -3
Four Years ☐ -4
Five Years ☐ -5
Six Years or More ☐ -6

10. Do you participate in the Career Ladder Program offered by the Board of Education?

Yes ☐ 33-1 No ☐ -2

YOUR PRESENT PARAPROFESSIONAL JOB

11. Of ALL the time you spend on your present paraprofessional job, what portion of ALL your time is spent:

	None of My Time	Some of My Time	About Half of My Time	Most of My Time	All of My Time
A. During School Hours	☐ 34-1	☐ -2	☐ -3	☐ -4	☐ -5
B. After School Hours (including weekends)	☐ 35-1	☐ -2	☐ -3	☐ -4	☐ -5

12. a. In your present paraprofessional job, where do you do MOST of your work? (Check only one)

In a School ☐ 36-1 Outside of a School ☐ -2

b. If ANY of your present work takes place IN A SCHOOL, how much of your time is spent in the:

	None of My Time	Some of My Time	About Half of My Time	Most of My Time	All of My Time
A. Classroom	☐ 37-1	☐ -2	☐ -3	☐ -4	☐ -5
B. School Office	☐ 38-1	☐ -2	☐ -3	☐ -4	☐ -5
C. Playground	☐ 39-1	☐ -2	☐ -3	☐ -4	☐ -5
D. Community or Family Room	☐ 40-1	☐ -2	☐ -3	☐ -4	☐ -5
E. Other (Please specify) ________	☐ 41-1	☐ -2	☐ -3	☐ -4	☐ -5

13. If you are working with students, what grade level(s) are involved? (You may check more than one)

I Am Not Working with Students ☐ 42-1
Pre-Kindergarten ☐ -2
Kindergarten ☐ -3
First Grade ☐ -4
Second Grade ☐ -5
Third Grade ☐ -6
Fourth Grade ☐ -7
Fifth Grade ☐ -8
Sixth Grade ☐ -9
Junior or Intermediate School ☐ -0
Senior High School ☐ -x

14.a. Who of the following MOST OFTEN supervises (that is, who directs and inspects) your work as a paraprofessional? (Check ONLY ONE.)

Teacher ☐ 43-1
Teacher Trainer ☐ -2
Principal ☐ -3
Assistant Principal ☐ -4
Project Director/Coordinator (or a member of his staff) ☐ -5
Guidance Counselor ☐ -6
Department or Grade Chairman ☐ -7
Another Paraprofessional (Example: Auxiliary Trainer or Parent Program Assistant) ☐ -8
Other (Please specify) ☐ -9
____

b. About how often does this person take time to help you with your work? If you do not see this person regularly, please try to average or estimate approximately how often you see this person.

Never ☐ 44-1
Once A Month ☐ -2
Twice A Month ☐ -3
Three Times A Month ☐ -4
Once A Week ☐ -5
Twice A Week ☐ -6
Three Times A Week ☐ -7
Four Times A Week ☐ -8
Once A Day ☐ -9
All The Time ☐ -0

15. a. Which of the following languages do you speak, read, or write? (You may check more than one.)

	Speak	Read	Write
English	☐ 45-1	☐ -2	☐ -3
Spanish	☐ 46-1	☐ -2	☐ -3
French	☐ 47-1	☐ -2	☐ -3
Italian	☐ 48-1	☐ -2	☐ -3
German	☐ 49-1	☐ -2	☐ -3
Russian	☐ 50-1	☐ -2	☐ -3
Hebrew	☐ 51-1	☐ -2	☐ -3
Chinese	☐ 52-1	☐ -2	☐ -3
Other (Please specify) ______________	☐ 53-1	☐ -2	☐ -3

b. Which of these languages do you use on your present job as a paraprofessional? (You may check more than one.)

English ☐ 54-1
Spanish ☐ -2
French ☐ -3
Italian ☐ -4
German ☐ -5
Russian ☐ -6
Hebrew ☐ -7
Chinese ☐ -8
Other (Please specify) ______________ ☐ -9

16. If you do any teaching or tutoring of students in your present paraprofessional job, what is the subject area?

I Don't Teach Students ☐ 55-1
Reading ☐ -2
Language Arts – English ☐ -3
Math or Arithmetic ☐ -4
History or Social Studies ☐ -5
Science ☐ -6
Languages ☐ -7
Art and Music ☐ -8
Vocational Subjects ☐ -9
Physical Education ☐ -0
Other (Please specify) ______________ ☐ -x

YOUR NEIGHBORHOOD

17. How long have you lived in your present neighborhood?

Less Than One Year	☐ 56-1	7-8 Years	☐ -5
1-2 Years	☐ -2	9-10 Years	☐ -6
3-4 Years	☐ -3	11-15 Years	☐ -7
5-6 Years	☐ -4	More Than 15 Years	☐ -8

18. Of all the children or families you work with, about how many live within three blocks of your home?

None	☐ 57-1	About Half	☐ -4
Very Few	☐ -2	More Than Half	☐ -5
Some	☐ -3		

19. Of all the children you work with, about how many have you taken care of at home as a favor to the family and not because of your job?

None	☐ 58-1	About Half	☐ -4
Very Few	☐ -2	More Than Half	☐ -5
Some	☐ -3		

20. Of all the children or families you work with, about how many do you see while out shopping or walking in the neighborhood or at the park?

None	☐ 59-1	About Half	☐ -4
Very Few	☐ -2	More Than Half	☐ -5
Some	☐ -3		

21. Of all the children or families you work with, about how many go to your church, or belong to some other organization you belong to?

None	☐ 60-1	About Half	☐ -4
Very Few	☐ -2	More Than Half	☐ -5
Some	☐ -3		

22. Of all the adults you work with now, about how many were in elementary or secondary school with you?

None	☐ 61-1	About Half	☐ -4
Very Few	☐ -2	More Than Half	☐ -5
Some	☐ -3		

SECTION B

Directions:

To find out exactly what you do on your job, we have listed below about 170 activities we think you might have done or are doing now on your job.

1. Read each activity and check how often you do it in the columns to the right. If you do not do an activity on your job, check Never. If you do an activity on your job, check either Once In A While, Fairly Often, or Very Often. Please make one check for each activity

EXAMPLE:

	HOW OFTEN ARE YOU LIKELY TO DO THIS OR SOMETHING LIKE THIS ON YOUR JOB			
Activities	Never	Once In A While	Fairly Often	Very Often
Reading aloud to children	76-1	-2	✓ -3	-4

If "reading aloud to children" is an activity you do "fairly often" on your paraprofessional job, you would have checked the column to the right labeled "fairly often" as the example shows here.

2. As you go over the different activities, you may feel that some are repeated. However, EACH ITEM IS DIFFERENT. Be sure to read them carefully.

3. We know this is a long questionnaire and apologize for its length. However, instead of asking you to write a two or three page essay describing your job, we have written a checklist to make things easier for you.

JOB DESCRIPTIONS

ACTIVITIES	HOW OFTEN ARE YOU LIKELY TO DO THIS OR SOMETHING LIKE THIS ON YOUR JOB?			
	Never	Once in a While	Fairly Often	Very Often
Playing a musical instrument or singing with the pupils	62-1	-2	-3	-4
Keeping records of student performance and progress in reading, math, or other skills, for example: a file of all his tests or a record of books he has read	63-1	-2	-3	-4
Organizing a school party or fair: getting refreshments, hiring a band, setting up exhibits or rides	64-1	-2	-3	-4
Setting up and arranging meetings for the paraprofessionals in your school, such as: reserving a room, announcing the meeting, preparing materials	65-1	-2	-3	-4
Letting the school know of parents who are interested in working with school children or in other school jobs	66-1	-2	-3	-4
Teaching students how to take care of their health: telling them about proper eating, sleeping, and other health habits	67-1	-2	-3	-4
Taking inventory of library or classroom books, general school supplies, audio-visual equipment in the school, etc.	68-1	-2	-3	-4
Getting together a group of people from your neighborhood to go to a movie, sports event or other show	69-1	-2	-3	-4
Listening to children tell a story they made up, or about what they did over the weekend	70-1	-2	-3	-4
Showing parents ways they can help their children do school work at home, such as: suggesting questions parents can ask about an assignment or learning drills and games they can play with their children	71-1	-2	-3	-4
Meeting with a family and a principal to discuss a particular legal problem which the family might have	72-1	-2	-3	-4
Advising families on how to help their children stay out of trouble with the law, such as: making sure they are home every night, or that they keep appointments with the youth worker	73-1	-2	-3	-4
Answering and using the telephone, intercom or P.A. system in the school office	74-1	-2	-3	-4
Finding out if the school office can help families who have to relocate or are having trouble with their housing	75-1	-2	-3	-4
Assisting with classroom experiments, demonstrations, etc.	76-1	-2	-3	-4
Learning the procedures for handling housing complaints: who to call, what forms to fill in, etc. Finding out what the housing authority can do to relocate tenants	78-1	-2	-3	-4
Helping students plan regular committee meetings or programs for special events	79-1	-2	-3	-4
Getting to know what families in your school are in need of welfare or other financial assistance	80-1	-2	-3	-4
5-3 Drawing up schedules for buses, classrooms, or special facilities (like auditoriums or gyms)	6-1	-2	-3	-4
Making an appointment for a parent with an employment agency or center	7-1	-2	-3	-4
Cataloguing and filing books in the library; filing cards in the card catalogue	8-1	-2	-3	-4
Bringing a doctor to see a parent who is ill and can't leave the house	9-1	-2	-3	-4

JOB DESCRIPTIONS

ACTIVITIES	HOW OFTEN ARE YOU LIKELY TO DO THIS OR SOMETHING LIKE THIS ON YOUR JOB?			
	Never	Once in a While	Fairly Often	Very Often
Making appointments and arranging meetings for principals, guidance counselors, and other school staff	10-1	-2	-3	-4
Telling families who they can call about housing complaints, or where there may be apartments to rent	11-1	-2	-3	-4
Keeping a record of students' illnesses and handicaps or medical absences from school	12-1	-2	-3	-4
Talking quietly to a child who is upset or disturbing the class	13-1	-2	-3	-4
Learning about special programs the school has to offer, such as: tutoring, remedial reading, Black or Puerto Rican cultural classes, etc.	14-1	-2	-3	-4
Greeting parents, community leaders, or others who come to the school	15-1	-2	-3	-4
Hearing complaints from parents about problems they have with the school	16-1	-2	-3	-4
Sending students to the principal's office, or other disciplinary staff	17-1	-2	-3	-4
Taking children to the health clinic for regular check-ups	18-1	-2	-3	-4
Correcting and grading essay tests or themes	19-1	-2	-3	-4
Typing rough drafts, memos, and letters for the school office or classroom	20-1	-2	-3	-4
Telling a student's guidance counselor, or teacher, or other school staff when the student is in trouble with the police	21-1	-2	-3	-4
Administering tests developed by the teacher, such as: spelling tests, reading dictation, math quizzes	22-1	-2	-3	-4
Arranging meetings between parents and court officials (youth workers, judges, etc.) to work out legal problems the family might have	23-1	-2	-3	-4
Checking play equipment for safety and good condition, such as: reporting broken chains on a swing	24-1	-2	-3	-4
Taking a student to have an interview with an organization such as the P.T.A., youth center, or a church group which is offering scholarships for camp or other special programs	25-1	-2	-3	-4
Preparing classroom materials: mixing paints, sharpening pencils, laying out colored paper, etc.	26-1	-2	-3	-4
Arranging a meeting between the principal and a parent interested in possible school jobs	27-1	-2	-3	-4
Planning a class field trip or visit	28-1	-2	-3	-4
Giving parents advice on health precautions such as suggesting menus for a balanced diet, ways to dress children more warmly in winter, etc.	29-1	-2	-3	-4
Keeping a pupil or group of pupils after school	30-1	-2	-3	-4
Giving to the health clinic a list of children who need vaccinations or other shots	31-1	-2	-3	-4
Distributing routine notices, such as: announcements of P.T.A. meetings, staff meetings, schedule changes, or other notices	32-1	-2	-3	-4

JOB DESCRIPTIONS

ACTIVITIES	HOW OFTEN ARE YOU LIKELY TO DO THIS OR SOMETHING LIKE THIS ON YOUR JOB?			
	Never	Once in a While	Fairly Often	Very Often
Finding out what programs the school has for suspended students	33-1	-2	-3	-4
Taking charge of the class for short periods of time when the teacher is called away, such as: continuing a lesson, reading a story, etc.	34-1	-2	-3	-4
Trading ideas with families about good buys in clothing, food or housewares	35-1	-2	-3	-4
Helping children dress and undress	36-1	-2	-3	-4
Taking a child to see the school nurse	37-1	-2	-3	-4
Showing pupils how to develop and improve skills in such areas as sports and exercises, sewing, dancing, drawing, etc.	38-1	-2	-3	-4
Talking over with a principal or teacher the problems families are having with welfare or in supporting their children	39-1	-2	-3	-4
Helping young children learn how to use crayons, scissors, paste and paint	40-1	-2	-3	-4
Taking records, reports and messages to the school office	41-1	-2	-3	-4
Informing parents of their legal rights and where they can find help when they need advice about adoption, a law suit or other legal problem	42-1	-2	-3	-4
Making arrangements with the school staff for a pupil to receive lunch money	43-1	-2	-3	-4
Correcting homework, workbooks, papers, etc.	44-1	-2	-3	-4
Speaking to a youth worker about the needs of a student who has received a warning	45-1	-2	-3	-4
Checking out books for students in the library or schoolroom	46-1	-2	-3	-4
Telling local organizations, churches, clinics, government agencies, etc. of the needs parents have for day care centers, pre-school programs or workshops to discuss school-problems	47-1	-2	-3	-4
Pronouncing and spelling new words; explaining their meaning to children	48-1	-2	-3	-4
Stopping arguments and fights among students	49-1	-2	-3	-4
Arranging a meeting with parents and the school nurse to discuss school health programs, such as an annual polio vaccination	50-1	-2	-3	-4
Monitoring pupil activities during class time, study halls, etc.	51-1	-2	-3	-4
Learning about the activities of the public library or a local street academy to help students with their school work	52-1	-2	-3	-4
Organizing a meeting with the parents and school staff to discuss ways to raise money for the P.T.A. or other school-community programs	53-1	-2	-3	-4
Operating a duplicating machine, such as a mimeo, ditto, xerox or rexograph	54-1	-2	-3	-4
Asking the school nurse to recommend a doctor or special clinic to meet a family's health problem	55-1	-2	-3	-4

JOB DESCRIPTIONS

ACTIVITIES	HOW OFTEN ARE YOU LIKELY TO DO THIS OR SOMETHING LIKE THIS ON YOUR JOB?			
	Never	Once in a While	Fairly Often	Very Often
Keeping attendance records in the classroom for every day	56-1	-2	-3	-4
Giving to an employment agency or a job placement center a list of parents or other neighborhood people looking for jobs	57-1	-2	-3	-4
Cutting stencils, ditto or other duplication masters	58-1	-2	-3	-4
Preparing the paraprofessional payroll for your school: collecting time sheets, handing out pay checks, and checking time cards	59-1	-2	-3	-4
Calling a health clinic or doctor's office to inform them of a family's health problem	60-1	-2	-3	-4
Talking to a pupil and a youth worker when the pupil is in trouble	61-1	-2	-3	-4
Arranging meetings between a student, and his guidance counselor or teacher to discuss a problem the student has in school, such as: frequent tardiness, dropping out, suspension, a learning problem, etc.	62-1	-2	-3	-4
Filing and sorting (records, papers, mail, etc.)	63-1	-2	-3	-4
Arranging a meeting with a social worker and a family having trouble with their welfare payments	64-1	-2	-3	-4
Taking students to enroll in a training program not given by the school system for example: Neighborhood Youth Corps	65-1	-2	-3	-4
Organizing and distributing general school supplies, such as: different kinds of paper, paints, pencils, composition books, etc.	66-1	-2	-3	-4
Bringing families to community workshops or assemblies to discuss school problems, such as: released time for religious or other classes, traffic safety at school crossings, drugs in the schools, etc.	67-1	-2	-3	-4
Collecting background information from Government agencies or business offices about taxes, welfare payments, loans, educational scholarships, etc.	68-1	-2	-3	-4
Arranging a meeting with a student and a guidance counselor to discuss after-school jobs	69-1	-2	-3	-4
Telling Manpower Training Centers or other training programs of students interested in job training	70-1	-2	-3	-4
Taking home children who are ill	71-1	-2	-3	-4
Telling a guidance counselor about a student who needs a job	72-1	-2	-3	-4
Assisting in collecting or recording money for school bank, lunch or trips	73-1	-2	-3	-4
Letting the school people know when a family is changing their address or moving out of the district	74-1	-2	-3	-4
Playing learning games with pupils, such as: rhyming, guessing or finger games	75-1	-2	-3	-4
Suggesting to the school that it begin programs to benefit students in tutoring, drama or other arts or special trips	76-1	-2	-3	-4
Attending meetings with teachers	77-1	-2	-3	-4
Suggesting to the school ways to provide parents with current information on Board of Education policies, election of local school boards, or other school matters	78-1	-2	-3	-4

JOB DESCRIPTIONS

ACTIVITIES	HOW OFTEN ARE YOU LIKELY TO DO THIS OR SOMETHING LIKE THIS ON YOUR JOB?			
	Never	Once in a While	Fairly Often	Very Often
Assisting pupils with learning drills (word recognition, pronounciation, spelling, math.)	79-1	-2	-3	-4
Talking with a teacher, counselor or other member of the school staff about a child with a special health problem, such as: poor vision or hearing	80-1	-2	-3	-4
5-4 Getting the room ready for the next day's class by arranging tables and chairs, putting out materials, cleaning boards	6-1	-2	-3	-4
Telling local organizations (church groups, agencies, etc.) about students you think could use a scholarship or educational loan	7-1	-2	-3	-4
Working with children on learning drills they can do at home: such as playing with flashcards, reading signs on the street or counting the steps in stairways	8-1	-2	-3	-4
Listening to students tell about their work experiences and search for jobs	9-1	-2	-3	-4
Showing pupils how to use a teaching machine, cuisinaire rods, bead boards or science and language laboratory equipment	10-1	-2	-3	-4
Listening to parents talk about problems they have with their landlord, building superintendent, or in finding a new place to live	11-1	-2	-3	-4
Organizing recess time into directed games and activities	12-1	-2	-3	-4
Finding out from students if they need money to stay in school, or for other essential expenses	13-1	-2	-3	-4
Giving first aid to children in accordance with school board policies, such as: cleaning a cut or scrape, putting on a band-aid	14-1	-2	-3	-4
Finding out how the school helps students get working papers, jobs, and social security numbers	15-1	-2	-3	-4
Learning what services job centers offer, such as: training or counseling; collecting names of possible employment agencies or employers	16-1	-2	-3	-4
Inviting parents to meetings to discuss with school staff issues, such as: election of a local school board, rezoning or a new playground	17-1	-2	-3	-4
Making sure a student meets with a probation officer regularly	18-1	-2	-3	-4
Recruiting and registering pupils: taking their names, telling them who their teachers are	19-1	-2	-3	-4
Helping a student write an application for a loan or scholarship	20-1	-2	-3	-4
Taking charge of the attendance records for the entire school, such as: a file of absence notes, attendance sheets for every class, etc.	21-1	-2	-3	-4
Helping a parent fill in a job application or set up an interview for a job	22-1	-2	-3	-4
Talking with the school principal, or other staff members about legal problems a family has	23-1	-2	-3	-4
Preparing visual aids for the teacher, such as: word cards, alphabet posters, word and picture games, time tables, flash cards, science charts	24-1	-2	-3	-4
Keeping lists or people you can call about health, employment, housing, welfare or legal problems	25-1	-2	-3	-4
Monitoring the doors and hallways of the school	26-1	-2	-3	-4

JOB DESCRIPTIONS

ACTIVITIES	HOW OFTEN ARE YOU LIKELY TO DO THIS OR SOMETHING LIKE THIS ON YOUR JOB?			
	Never	Once in a While	Fairly Often	Very Often
Telling students about school programs they might be interested in: special assemblies, and after-school art class, music group or sports program	27-1	-2	-3	-4
Accompanying students on field trips	28-1	-2	-3	-4
Telling families about available health clinics, vaccination programs, medical tests or other health services they can use	29-1	-2	-3	-4
Reporting pupils' learning problems to a teacher	30-1	-2	-3	-4
Discussing with a student how to dress on a job, show up on time and keep a time sheet	31-1	-2	-3	-4
Listening to parents talk about jobs they have had, problems they are having on their jobs, or jobs they are looking for	32-1	-2	-3	-4
Circulating information to paraprofessionals in other schools and districts about your program	33-1	-2	-3	-4
Learning about the school's health services, for example: regular doctors' visits, treatments or check-ups offered by the nurse's office	34-1	-2	-3	-4
Explaining school rules to pupils	35-1	-2	-3	-4
Learning about unsafe health conditions in homes, such as: poor heating, faulty plumbing or lack of pest control	36-1	-2	-3	-4
Reporting paraprofessionals' problems to the administration	37-1	-2	-3	-4
Keeping files of information on health clinics, tutoring programs, job training centers, welfare programs, police programs such as PAL, housing projects or other community agencies	38-1	-2	-3	-4
Assigning students to seats or work areas such as classroom desks, assembly seats or lab tables	39-1	-2	-3	-4
Making costumes, properties, programs, etc., for a student play or other production	40-1	-2	-3	-4
Letting students know about training programs, special vocational high schools, summer jobs, or employment centers where they might be able to find a job	41-1	-2	-3	-4
Going over a paper with a child, correcting and pointing out his errors	42-1	-2	-3	-4
Correcting and grading short-answer tests such as fill-ins or multiple choice	43-1	-2	-3	-4
Letting the Welfare Board know of families that need assistance	44-1	-2	-3	-4
Participating with the teacher in program evaluation, such as: filling out a report form, checking students' progress	45-1	-2	-3	-4
Arranging for a housing official to meet with a family and their landlord in order to settle a rent or other housing dispute	46-1	-2	-3	-4
Taking charge of pupils on a bus, in a cafeteria, on the playground or in assembly	47-1	-2	-3	-4
Telling parents where to arrange loans or other kinds of financial help	48-1	-2	-3	-4

JOB DESCRIPTIONS

ACTIVITIES	HOW OFTEN ARE YOU LIKELY TO DO THIS OR SOMETHING LIKE THIS ON YOUR JOB?			
	Never	Once in a While	Fairly Often	Very Often
Handing out and collecting materials in class (art materials, books, snacks, etc)	49-1	-2	-3	-4
Listening to children read or give reports, for example from a reading book, or a book report, etc.	50-1	-2	-3	-4
Informing the proper authority of housing complaints families have and of families who have to relocate	51-1	-2	-3	-4
Delivering and collecting supplies and equipment such as audio-visual equipment (movie projectors, tape recorders, record players) and classroom supplies (paints, paper, books)	52-1	-2	-3	-4
Helping teacher make arrangements for a trip, such as phoning a bus company, collecting permissions slips, etc.	53-1	-2	-3	-4
Telling families about Manpower Training Centers, job placement centers, or possible employers; informing them of minimum wage laws or other job information	54-1	-2	-3	-4
Listening to pupils rehearse for a play or other production, hearing their lines, practicing their cues and entries, etc.	55-1	-2	-3	-4
Preparing bulletin board displays, such as: posting pupils' work, mounting pictures, etc.	56-1	-2	-3	-4
Acting out stories with children	57-1	-2	-3	-4
Letting community agencies know how they can participate in tutoring programs, sports programs, or other after-school activities for students	58-1	-2	-3	-4
Planning a picnic at a beach, state park or elsewhere for a group from the neighborhood or school	59-1	-2	-3	-4
Helping children wash up after playing or working; taking children to the wash room	60-1	-2	-3	-4
Helping families to register a housing complaint, or look for a new place to live	61-1	-2	-3	-4
Locating reference or teaching materials such as books, maps, charts, etc.	62-1	-2	-3	-4
Keeping records of names, addresses and telephone numbers of families you work with	63-1	-2	-3	-4
Accompanying students to the library, lunchroom or another class	64-1	-2	-3	-4
Telling families about programs and activities in your school, or in other schools, such as tutoring, pre-school programs, parent-teacher workshops, etc.	65-1	-2	-3	-4
Playing a record, tape recorder, film strip or movie projector to pupils for a lesson	66-1	-2	-3	-4
Recommending special doctors or health centers to students with medical problems	67-1	-2	-3	-4
Making refreshments or decorations for a school play, a meeting, or special program	68-1	-2	-3	-4
Interpreting lessons to a non-English-speaking child, such as a child speaking Spanish, French, Chinese or another language	69-1	-2	-3	-4
Talking with students about problems they have with police	70-1	-2	-3	-4

JOB DESCRIPTIONS

ACTIVITIES	HOW OFTEN ARE YOU LIKELY TO DO THIS OR SOMETHING LIKE THIS ON YOUR JOB?			
	Never	Once in a While	Fairly Often	Very Often
Listening to parents talk about legal problems they have, such as gaining custody of a child, or getting a divorce	71-1	-2	-3	-4
Assigning classroom jobs or responsibilities to students, such as erasing the blackboard or closing the windows, etc.	72-1	-2	-3	-4
Keeping a file of local doctors, health clinics, Medicare and Medicaid rules or other health information	73-1	-2	-3	-4
Preparing questions for student's tests	74-1	-2	-3	-4
Listening to pupils talk about their classes, things they are learning, or problems they have with other students, teachers or their school work	75-1	-2	-3	-4
Reading aloud to students	76-1	-2	-3	-4
Telling students where they can talk to lawyers or counselors in case they are in trouble with the law	77-1	-2	-3	-4
Taking care of books, for example: repairing bindings, erasing pencil marks, taping torn pages, etc.	78-1	-2	-3	-4
Telling students about organizations which have scholarships or loans to help them through school	79-1	-2	-3	-4
Getting in touch with a lawyer or a group like the Legal Aid Society, when a family needs legal help, such as in filing a suit, or presenting a case in court	80-1	-2	-3	-4
5-5 Discussing a student's problems in affording school clothes, lunch money, or school trips with his counselor or other school staff	6-1	-2	-3	-4
Keeping a record of the office or visiting hours and telephone numbers of people in a court building, police station or other law office	7-1	-2	-3	-4
Orienting new paraprofessionals to their job, such as: describing job duties or introducing them to the people they will work with	8-1	-2	-3	-4
Taking pupils to a tutoring session, Black or Puerto Rican history course, a film at the public library or other activities put on by local agencies to help students	9-1	-2	-3	-4
Going over with the teacher class plans for the next few weeks	10-1	-2	-3	-4
Reporting discipline problems to principal, counselors, teachers, parents, or others	11-1	-2	-3	-4
Learning from the school what loans or scholarships they have for students to go to college or to take special courses	12-1	-2	-3	-4
WHAT OTHER JOBS DO YOU DO? Please specify:				
	13-1	-2	-3	-4
	14-1	-2	-3	-4
	15-1	-2	-3	-4
	16-1	-2	-3	-4
	17-1	-2	-3	-4

* As you do the activities you have just checked, how much of your time do you use another language in addition to English (such as Spanish, French, Chinese, etc.):

None of My Time	☐ 18-1
Some of My Time	☐ -2
About Half of My Time	☐ -3
Most of My Time	☐ -4
All of My Time	☐ -5

* Think about all the time you spend on your paraprofessional job. How much of your time is spent in each of the following ways. Please answer for each item A-G.

		None of My Time	Some of My Time	About Half of My Time	Most of My Time	All of My Time
A.	Attending Meetings	☐ 19-1	☐ -2	☐ -3	☐ -4	☐ -5
B.	Conducting interviews which do not take place in homes	☐ 20-1	☐ -2	☐ -3	☐ -4	☐ -5
C.	Making phone calls	☐ 21-1	☐ -2	☐ -3	☐ -4	☐ -5
D.	Visiting homes	☐ 22-1	☐ -2	☐ -3	☐ -4	☐ -5
E.	Reading Brochures	☐ 23-1	☐ -2	☐ -3	☐ -4	☐ -5
F.	Writing announcements	☐ 24-1	☐ -2	☐ -3	☐ -4	☐ -5
G.	Other (Please specify)					
	________________	☐ 25-1	☐ -2	☐ -3	☐ -4	☐ -5
	________________	☐ 26-1	☐ -2	☐ -3	☐ -4	☐ -5

OUR SINCERE THANKS FOR YOUR PARTICIPATION

PLEASE RETURN THE STAMPED PRE-ADDRESSED ENVELOPE ENCLOSED TO:

Mrs. Carol Aslanian
Institute for Educational Development
52 Vanderbilt Avenue
New York, New York 10017

Institute for Educational Development
May, 1971

Project______________ -70

TRAINING OF PARAPROFESSIONALS
IN THE NEW YORK CITY SCHOOLS

This is the third questionnaire in our study of paraprofessionals employed in the district decentralized State Urban Education and ESEA Title I projects in the New York City schools. It has been designed to gather information about paraprofessional training programs in New York City. For the purposes of this study, training is considered to take place outside the classroom situation. The questions refer to both your training this year and in previous years.

The questionnaire has been divided into two sections. Section A deals with general questions about your training: where you meet, how often you meet, who is present at your training sessions, etc. Section B is designed to find out what concepts (knowledge), skills, and attitudes were taught or discussed during your training sessions.

The information which you provide in this document will help determine how much and what kind of training paraprofessionals in the New York City schools have received for the jobs they are expected to perform, and how the training programs might best be structured to meet the needs of schools and paraprofessionals. Your cooperation will be greatly appreciated.

SECTION A: STRUCTURE OF PARAPROFESSIONAL TRAINING

Directions: Read each question carefully. There are no right or wrong answers. Just check the response which best answers the question for you.

1. Within the school, who has been the person most responsible for supervising (that is, directing and supervising) your daily duties as a paraprofessional?

	This Year	Previous Year(s)
Classroom Teacher	☐	☐
Teacher Trainer	☐	☐
Assistant Principal	☐	☐
Principal	☐	☐
Another Paraprofessional (example: Auxiliary Trainer or Parent Program Assistant)	☐	☐
Other (Please specify) ______	☐	☐

2. Was the person responsible for supervising you also responsible for training you?

	This Year	Previous Year(s)
Yes	☐	☐
No	☐	☐

3. If not, who has been the person most responsible for your training?

	This Year	Previous Year(s)
Classroom Teacher	☐	☐
Assistant Principal	☐	☐
Teacher Trainer	☐	☐
Principal	☐	☐
Auxiliary Trainer	☐	☐
Parent Program Assistant	☐	☐
District Trainer	☐	☐
Other (Please specify) ______	☐	☐

4. Where has your training usually taken place?

	This Year	Previous Year(s)
In The Classroom	☐	☐
In The School	☐	☐
Outside The School, But In The District	☐	☐
Other (Please specify) ________________	☐	☐

5. How often has your regularly scheduled training taken place?

	This Year	Previous Year(s)
More Than Once A Week	☐	☐
Once A Week	☐	☐
Twice A Month	☐	☐
Once A Month	☐	☐
Less Than Once A Month	☐	☐

6. When has this training usually taken place?

	This Year	Previous Year(s)
During School Hours	☐	☐
After School Hours	☐	☐
On The Weekend	☐	☐
Other (Please specify) ________________	☐	☐

7. How long did the training sessions usually last?

	This Year	Previous Year(s)
An Hour Or Less	☐	☐
More Than An Hour	☐	☐
Half A Day	☐	☐
A Whole Day	☐	☐
Two Or More Days In A Row	☐	☐

8. Who has usually been present at your training sessions?

	This Year	Previous Year(s)
Only Paraprofessionals From Your School	☐	☐
Paraprofessionals From Other Schools Within Your District	☐	☐
Paraprofessionals From Other Districts	☐	☐

9. Has your classroom teacher ever accompanied you to the training sessions?

	This Year	Previous Year(s)
Yes	☐	☐
No	☐	☐

10. If yes, how often?

	This Year	Previous Year(s)
Rarely	☐	☐
Occasionally	☐	☐
Frequently	☐	☐
Always	☐	☐

11. Have other school officials (e.g., principal, assistant principal, guidance counselor, etc.) ever been present at the training sessions?

	This Year	Previous Year(s)
Yes	☐	☐
No	☐	☐

12. If so, who was usually present? (You may check more than one.)

	This Year	Previous Year(s)
Principal	☐	☐
Assistant Principal	☐	☐
Teacher Trainer	☐	☐
Auxiliary Trainers	☐	☐
Guidance Counselor	☐	☐
Coordinator Of The Program	☐	☐
Other (Please specify)	☐	☐

____

13. If school officials were present, how often have they attended?

	Rarely	Occasionally	Frequently	Always
This Year	☐	☐	☐	☐
Previous Year(s)	☐	☐	☐	☐

14. (A) How often were the following instructional methods used during your training sessions this year?

	Never	Rarely	Occasionally	Frequently
Individual Conference	☐	☐	☐	☐
Group Discussions	☐	☐	☐	☐
Lecture	☐	☐	☐	☐
Demonstrations	☐	☐	☐	☐
Role Playing (acting as parents, pupils, teachers, etc.)	☐	☐	☐	☐

(B) How often were the following instructional methods used during your training sessions in previous years?

	Never	Rarely	Occasionally	Frequently
Individual Conference	☐	☐	☐	☐
Group Discussions	☐	☐	☐	☐
Lecture	☐	☐	☐	☐
Demonstrations	☐	☐	☐	☐
Role Playing (acting as parents, pupils, teachers, etc.)	☐	☐	☐	☐

15. (A) How often were the following media and activities used during your training sessions this year?

	Never	Rarely	Occasionally	Frequently
Films	☐	☐	☐	☐
Filmstrips	☐	☐	☐	☐
Recordings	☐	☐	☐	☐
Video Tapes	☐	☐	☐	☐
Field Trips	☐	☐	☐	☐
Outside Speakers	☐	☐	☐	☐

15. (B) How often were the following media and activities used during your training sessions in previous years?

	Never	Rarely	Occasionally	Frequently
Films	☐	☐	☐	☐
Filmstrips	☐	☐	☐	☐
Recordings	☐	☐	☐	☐
Video Tapes	☐	☐	☐	☐
Field Trips	☐	☐	☐	☐
Outside Speakers	☐	☐	☐	☐

SECTION B: CONTENT OF PARAPROFESSIONAL TRAINING

Directions: To find out what training you have received, we have listed below 120 items we think might have been included in your training, either in formal training or in the classroom. We ask that you read these items and try to remember if they were ever covered during your training.

We are not asking if you know these items or if you perform these tasks. Some of them are items which you may know from your own experience of from your own education. We wish to know if they have been presented in a training situation such as a workshop, a lecture by a guest speaker, or a group discussion with other paraprofessionals. Some items may have been covered in both the classroom and in training sessions. Others may have been taught only in the classroom or only in a training session. Some items may have just been mentioned briefly. Other items may have been presented or talked about longer and stressed as being especially important.

In answering this section, please:

1. Check "Already Knew" if you knew the item before entering the paraprofessional program.
2. Check "Not Taught" if the item was not a part of either your classroom training or a training session.
3. Check "Taught in the Classroom" if your teacher spent time discussing the item with you.
4. Check "Taught in Formal Training" if the item was presented in any training session. Also decide whether or not the item was merely "mentioned" or stressed and "emphasized."

Examples:

DURING YOUR TRAINING, WERE YOU TAUGHT:	Already Knew	Not Taught	Taught in the Classroom	Taught in Formal Training	
				Mentioned	Emphasized
how to prepare materials for duplication; for example, mimeograph stencils, transparencies.		✓			
how to allow enough time for pupils to practice a new skill, such as division or spelling.	✓		✓		
proper forms of printing and handwriting.	✓		✓		✓

DURING YOUR TRAINING, WERE YOU TAUGHT:	Already Knew	Not Taught	Taught in the Classroom	Taught in Formal Training	
				Mentioned	Emphasized
to help parents understand how children learn and to relate this to children's homework.					
how to decide whether or not to take a misbehaving child out of the room.					
that children have a need to be independent, that is, to be able to figure out new situations on their own and to be able to cope with them.					
principles for adding, subtracting, multiplying or dividing fractional numbers.					
principles for preparing and giving an oral report.					

DURING YOUR TRAINING, WERE YOU TAUGHT:	Already Knew	Not Taught	Taught in the Classroom	Taught in Formal Training	
				Mentioned	Emphasized
that poor performance at school may be linked to home problems, such as parents who work all the time, sick or handicapped parents.					
how to praise children when they learn something new and connect the praise or reward to the learning.					
different forms of measurement; for example, time, weight, temperature and speed.					
to talk with parents to find out how they feel about the school.					

DURING YOUR TRAINING, WERE YOU TAUGHT:	Already Knew	Not Taught	Taught in the Classroom	Taught in Formal Training	
				Mentioned	Emphasized
how to prepare materials for duplication; for example, mimeograph stencils, transparencies.					
how to judge how much light, heat and ventilation there should be in the classroom.					
what teachers and principals like in a paraprofessional, such as interest, loyalty, patience, promptness, dependability.					
how to allow enough time for pupils to practice a new skill, such as division or spelling.					
set theory in arithmetic; for example, the meaning of words such as "intersection," "union," or "null set."					
how to use demonstrations or illustrations to make clear to pupils exactly what they are to learn.					
how to keep a record of permission slips for field trips or other school activities which require a parent's permission.					

DURING YOUR TRAINING, WERE YOU TAUGHT:	Already Knew	Not Taught	Taught in the Classroom	Taught in Formal Training	
				Mentioned	Emphasized
how to group pupils within each subject area by their ability in that subject; for example, putting all good readers in one group and all slow readers in another.					
proper forms of printing and handwriting.					

DURING YOUR TRAINING, WERE YOU TAUGHT:	Already Knew	Not Taught	Taught in the Classroom	Taught in Formal Training	
				Mentioned	Emphasized
what the usual process of physical growth is for children; for example, how much weight and height gain and what degree of muscle coordination to expect.					
what information can be found in dictionaries, encyclopedias, reader's guides and other reference books.					
ways to help children deal with their feelings toward children of other races and economic backgrounds.					
how to prepare the room for an activity; for example, by moving furniture, laying out pencils or papers, setting up paints.					
that children cannot think well when they are upset, frightened, tired or hungry.					
who the school's officials are, such as the principal, the assistant principal, the guidance counselors or the nurse.					
how to supervise pupils while going to and from assemblies, lunch and fire drills.					
principles of phonetics; that is, how to "sound out" and pronounce words.					
how to tell the members of the parents' association or community education groups about the goals of the school.					
the meaning of number places in arithmetic; for example, that 37 is three tens and seven ones.					

DURING YOUR TRAINING, WERE YOU TAUGHT:	Already Knew	Not Taught	Taught in the Classroom	Taught in Formal Training	
				Mentioned	Emphasized
that children who have trouble understanding or doing assigned school work may feel discouraged and stop trying to learn.					
what the symptoms of various health problems are; for example, inattention may be due to bad hearing, squinting to bad eyesight.					
how to help teachers and school officials understand parents' concern about their children.					
to be aware that a teacher might not understand children whose values and interests are different from her own.					

DURING YOUR TRAINING, WERE YOU TAUGHT:	Already Knew	Not Taught	Taught in the Classroom	Taught in Formal Training	
				Mentioned	Emphasized
how to operate duplicating machines, such as mimeograph, thermofax, rexograph or Xerox machines.					
that children have a need for acceptance and approval from children in their age group.					
that a child's responsibilities outside school may prevent or distract him from his school work; for example, helping with younger children.					
to allow for different learning rates of pupils when teaching new materials, and to allow for pupils with individual learning problems.					

DURING YOUR TRAINING, WERE YOU TAUGHT:	Already Knew	Not Taught	Taught in the Classroom	Taught in Formal Training	
				Mentioned	Emphasized
how to care for minor injuries, such as small cuts or scrapes.					
that a child's attitude toward school may be learned from his cultural or ethnic group.					
principles of spelling.					
how to supervise pupils before or after school, for example, in club or athletic activities.					
that a child should know clearly what he is expected to do, preferably by having it demonstrated to him.					
how to state a large number such as 6,537,413 in words.					
about the rules and regulations of your school for such matters as safety, reporting absences, ordering supplies.					
that individual children differ in the rate they learn new material and the length of time they remember it.					
what the usual amount of physical stamina or endurance is for children.					
how to present a variety of examples and illustrations to pupils when teaching or practicing a new concept or skill; for example, word and number games, workshops, an abacus.					
that children from poor families may have a high absence rate.					

DURING YOUR TRAINING, WERE YOU TAUGHT:	Already Knew	Not Taught	Taught in the Classroom	Taught in Formal Training	
				Mentioned	Emphasized
about the actions on your part for which you could be sued by parents; for example, failing to report a child's accident or sending a sick child home alone.					
that careers are open to paraprofessionals, such as those available through the Career Ladders Program.					
how to stop arguments and fights among students.					
at what age a child can be expected to classify objects and ideas according to similarities and differences.					
how to mend torn books or other broken teaching materials.					
how to help children talk about problems that are bothering them at home or in school.					
techniques of composition, such as how to organize and write paragraphs, stories, plays, etc.					
to explain suggestions from the community for educational improvements to school officials; for example, opening the school early so working mothers can leave the children there.					
that punishing a child for not learning something may cause him to stop trying to learn.					
what signs of abnormal physical growth are in children; for example, overweight, underweight, lack of proper coordination.					

DURING YOUR TRAINING, WERE YOU TAUGHT:	Already Knew	Not Taught	Taught in the Classroom	Taught in Formal Training	
				Mentioned	Emphasized
to be aware that children from different ethnic and cultural backgrounds might have trouble understanding each other because of their different interests and values.					
how to keep records of test scores and other grades.					
that children have a need for affection and approval from adults.					
that time for practicing new skills, such as division or spelling, must be allowed if children are to learn the skill.					
that children need a pleasant place (clean, safe, attractive) to live, work and play in.					

DURING YOUR TRAINING, WERE YOU TAUGHT:	Already Knew	Not Taught	Taught in the Classroom	Taught in Formal Training	
				Mentioned	Emphasized
that children of the same age can be very different in their ability to think and reason.					
that there are activities which children can participate in outside of school which will help them learn better; for example, going to museums, libraries, zoos.					
ways to show children that you care about them and feel affection for them.					
about the school's special services, such as the services provided by art, music, and physical education teachers, or by the school's nurse, guidance counselor, or psychologist.					

DURING YOUR TRAINING, WERE YOU TAUGHT:	Already Knew	Not Taught	Taught in the Classroom	Taught in Formal Training	
				Mentioned	Emphasized
that a child should be praised or rewarded almost immediately for learning something new.					
how to recognize symptoms of illness in children.					
that children who are afraid of failing may tend to withdraw or stop trying to learn.					
about special problems in the vicinity of the school, such as a dangerous street crossing or play area, or a special pollution problem.					
that a child must be told if he is doing an assigned task or problem right and if he is not, how to do it the right way.					
how to comfort a child who is upset.					
principles for writing personal and business letters.					

DURING YOUR TRAINING, WERE YOU TAUGHT:	Already Knew	Not Taught	Taught in the Classroom	Taught in Formal Training	
				Mentioned	Emphasized
how to keep records of a pupil's medical problems and any care he is receiving for those problems.					
how to make sure children wear warm clothing in cold weather.					

DURING YOUR TRAINING, WERE YOU TAUGHT:	Already Knew	Not Taught	Taught in the Classroom	Taught in Formal Training	
				Mentioned	Emphasized
that children from poor families are less likely to have had certain kinds of learning experiences; for example, travelling, reading, or learning games at home.					
how to make costumes, properties, programs, etc. for a student play or other production.					
how to report discipline problems to the principal, counselors, teachers, parents or other officials.					
how to set up and operate audio-visual equipment, such as a slide projector or motion picture projector.					
to be aware of the possible need to protect children from some adults, such as addicts, or streetgangs when going to and from school.					
to be aware of the contributions which various groups have made to American culture and society; for example, in the fields of music, medicine, science, athletics.					
how to record class attendance, milk money, and banking money.					
that children from poor families are unlikely to aim for professional careers because the adults they know are not professionals.					
that a pupil's grades and problems are confidential and should not be discussed outside of school.					
that school will be more effective if parents have a strong positive attitude toward it.					

DURING YOUR TRAINING, WERE YOU TAUGHT:	Already Knew	Not Taught	Taught in the Classroom	Taught in Formal Training	
				Mentioned	Emphasized
that individual children who are grouped by ability level in one subject, such as reading, may not be at the same ability level in other subjects, such as math or science.					
that children who are unhappy at home may tend to cause trouble in school.					
to judge how well pupils are learning and to understand what problems may keep them from learning well.					
how to clean up the room after an activity; for example, by straightening up desks, cleaning up paints, putting away supplies.					
how to care for a child who has a temporary handicap, such as a broken arm or leg.					

DURING YOUR TRAINING, WERE YOU TAUGHT:	Already Knew	Not Taught	Taught in the Classroom	Taught in Formal Training	
				Mentioned	Emphasized
that in poor families if younger children see their older brothers and sisters dropping out of school before graduation, they may feel school is unimportant.					
how to use your understanding of the community to help the teacher understand the values, interests and feelings of the children.					
how to correct mistakes without making the pupil feel he is being punished, or making him feel bad.					
how to help parents find out about the special services offered by the school, such as health, guidance, social services.					

DURING YOUR TRAINING, WERE YOU TAUGHT:	Already Knew	Not Taught	Taught in the Classroom	Taught in Formal Training	
				Mentioned	Emphasized
how to help children who are victims of bullies deal with these bullies.					
that many children do not automatically apply what they have learned in solving one problem when they are given a new problem to solve.					
that a child learns new ideas and concepts best by working with many different examples of the idea; for example, by working with word or number games, charts or diagrams.					
how to supervise a group of students who are being taken somewhere outside the school; for example, a class on a field trip.					

DURING YOUR TRAINING, WERE YOU TAUGHT:	Already Knew	Not Taught	Taught in the Classroom	Taught in Formal Training	
				Mentioned	Emphasized
at what age a child can move from concrete physical objects (blocks, beads, pegs) to a concept or idea (addition or subtraction).					
that a child's poor performance at school might be caused by money problems at home, such as lack of food, heat, or proper clothing, crowded housing.					
how to help a child who is misbehaving to understand and control his behavior.					
what the common childhood diseases are -- for example, measles, mumps, chicken pox -- and how to recognize them.					

DURING YOUR TRAINING, WERE YOU TAUGHT:	Already Knew	Not Taught	Taught in the Classroom	Taught in Formal Training	
				Mentioned	Emphasized
principles of grammar, such as parts of speech, sentence structure.					
that a child's mental development does not go on at an even speed -- sometimes it is fast and sometimes it is slower.					
how to keep an inventory of equipment, materials and supplies.					
that children may be less willing to come to school if they have to pass through a dirty or a dangerous neighborhood to get to the school, or more willing to come if they have to pass through an attractive and safe neighborhood.					
how to supervise a group of children who are doing one type of work at their seats while the teacher is instructing other children.					
how to keep current records of names, addresses, and telephone numbers of children in your class.					
that some teachers may misunderstand pupils of different ethnic backgrounds, who may have different values and interests.					
ways to make instructional displays, such as bulletin boards and wall posters.					
that some parents may be afraid to come to the school to talk to the teacher; for example, parents who have a language problem.					
not to use physical force to punish a child who has been upsetting the class.					

DURING YOUR TRAINING, WERE YOU TAUGHT:	Already Knew	Not Taught	Taught in the Classroom	Taught in Formal Training	
				Mentioned	Emphasized
principles for adding, subtracting, multiplying, or dividing whole numbers.					
to tell parents and community members about school policies regarding such things as attendance, suspension, permission slips for field trips, etc.					
that some parents may be afraid that teachers who are of a different ethnic group may not understand how best to help the children.					
different geometrical figures, such as a curve, a polygon, a quadrilateral, a square					
that some parents may have trouble understanding teachers when they talk about school; for example, when they are explaining the new math or a special reading program.					
anything about working in the library or about checking out books and equipment to students in the classroom.					

DURING YOUR TRAINING, WERE YOU TAUGHT:	Already Knew	Not Taught	Taught in the Classroom	Taught in Formal Training	
				Mentioned	Emphasized
how to tell parents and community members about school problems they could help with; for example, helping with extra-curricular activities or tutoring students who need extra help.					
how to supervise pupils during recess and play periods.					

DURING YOUR TRAINING, WERE YOU TAUGHT:	Already Knew	Not Taught	Taught in the Classroom	Taught in Formal Training	
				Mentioned	Emphasized
how to help children who feel like failures have more confidence in themselves and feel successful.					
why children should be proud of and feel a sense of identity with their own ethnic and cultural groups.					

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PRINCIPAL'S PARAPROFESSIONAL REPORT FORM

Name of Paraprofessional ________________________________

District, School ________________________________

Name of Principal ________________________ Date __________

Please compare the paraprofessional named above to other classroom paraprofessionals you have known. Check the appropriate box.

How would you characterize this paraprofessional in being:	Below Average	Average	Good	Very Good	Excellent	▨
1. cooperative in accepting suggestions and direction from others.						▨
2. patient with the children.						▨
3. pleasant to work with.						▨
4. adaptable to different situations and demands.						▨
5. sensitive to special pupil problems.						▨
6. fair in dealing with the children.						▨
7. able to relate to pupils.						▨
8. reliable and dependable.						▨
9. able to relate to teachers.						▨
10. well-organized in her activities.						▨

How well does she perform the following activities?	Below Average	Average	Good	Very Good	Excellent	Does Not Do
11. Talking quietly to children who are upset or disturbing the class.						
12. Disciplining students when needed.						
13. Assisting pupils with learning drills.						
14. Going over schoolwork with a child, correcting and pointing out his errors.						
15. Listening to children talk about what is on their minds.						
16. Explaining school rules to pupils.						
17. Correcting homework, workbooks, papers, etc.						

How would you describe the impact of her work on:	Below Average	Average	Good	Very Good	Excellent	▨
18. the pupils' learning more.						▨
19. the teacher's relating better to parents.						▨
20. the teacher's enjoying her job more.						▨
21. the pupils' liking school more.						▨
22. the teacher's relating better to minority groups in the community.						▨
23. the teacher's relating better to students.						▨
24. this paraprofessional's being given increased responsibility.						▨
25. the pupils' gaining self-confidence.						▨

WOULD YOU PLEASE SEE THAT YOU HAVE CHECKED EVERY ITEM

STUDENT ROSTER FORM--READING

District__________ School____________________________

Classroom Teacher________________________________

Observer____________________________________

Date Form Completed____________________________

			PRE-TEST READING Metropolitan Reading Test - Form B Administered March, 1970							POST-TEST READING Metropolitan Reading Test - Form F Administered April, 1971						
Name of Pupil	District & School Spring 1970	2nd Grade Teacher's Name	Word Knowledge		Reading		Avg.	Level		Word Knowledge		Reading		Avg.	Level	
								Prm. I	Upp. Prm.						Elem.	Prm. II
			RS [a]	GE [b]	RS	GE	GE			RS	GE	RS	GE	GE		

a) RS=Raw Score
b) GE=Grade Equivalent

STUDENT ROSTER FORM--MATHEMATICS

District__________ School____________________________ Observer____________________________________

Classroom Teacher__________________________________ Date Form Completed____________________________

Name of Pupil	District & School Spring 1970	2nd Grade Teacher's Name	PRE-TEST MATH Metropolitan Arithmetic Test - Form F Primary II Level Administered January, 1971							POST-TEST MATH Metropolitan Arithmetic Test - Form G Primary II Level Administered June, 1971						
			Comp.		Concepts		Problem Solving		Total Math.	Comp.		Concepts		Problem Solving		Total Math.
			RS [a]	GE [b]	RS	GE	RS	GE	GE	RS	GE	RS	GE	RS	GE	GE

a) RS=Raw Score
b) GE=Grade Equivalent

APPENDIX D

Data Analysis Procedures
Classroom Paraprofessionals

I. Definitions

- A. Children's Groups
- B. Improvement Scores
- C. Improvement Groups
- D. Affective Scores
- E. Affective Groups

II. Scoring

- A. Levels In Reading
- B. Conversion into Percentiles
- C. Affective Scoring
- D. Missing Data
- E. Combining over Levels and Sub-tests

III. Levels Of Significance

I. Definitions

A. Children's Groups

1. Cont. These are the children who were in the classrooms that did not have paraprofessionals during the study period. There were 35 such control classes.

2. Exp. These are the children who were in the classrooms that did have paraprofessionals. There were 63 such experimental classrooms.

3. Att. These are the specific children attended to by a paraprofessional. They are all from the Exp. group. Two sources of data were used to decide which children were attended to. One source was the observers' records; the other was the teachers' questionnaire. Separate classifications are used for "attended to in arithmetic" and "attended to in reading" in all of the analyses where performance or pre-tests are concerned. When analyzing children's attitudes in terms of whether or not they were attended to, we have defined as Att. any child who was attended to either in arithmetic or reading (or both).

   There were up to five opportunities for IED observers to note whether a child was attended to in reading; thus, each of the children was seen with a paraprofessional 0, 1, 2, 3, 4, or 5 times by the observer. The teachers reported how many hours in an average week the paraprofessional attended each child (none, fewer than 5, 5 to 10, 11 to 15, 16 to 20, more than 20). The two observations in arithmetic yielded a possible 0, 1, or 2 notations as to whether a child was seen with a paraprofessional. These data were cross-tabulated, and the definitions of "attended to" were derived from the cross-tabulations. (See Tables A and B.) For the analyses of improvement scores, "attended to in reading" was used separately from "attended to in arithmetic"; for analysis of the relation between paraprofessional attention and affective scores, IED defined Att. as the logical sum of attention either in reading or in arithmetic. Ninety percent of the children attended to in either subject were attended to in both.

TABLE A
TEACHER'S REPORTS OF PARA ATTENTION BY OBSERVATIONAL DATA
READING - EXPERIMENTAL CHILDREN
(Number of Children)

NUMBER OF TIMES OBSERVED	HOURS OF PARA ATTENTION					
	NONE	FEWER THAN 5 HRS.	5-10	11-15	NO ANS.	TOTAL
None	*1033	59	46	4	*18	1160
1	* 233	50	31	0	*15	329
2	* 97	28	27	1	8	161
3	36	16	34	0	1	87
4	8	9	15	0	2	34
TOTAL	1407	162	153	5	44	2771

TABLE B
TEACHER'S REPORTS OF PARA ATTENTION BY OBSERVATIONAL DATA
MATH - EXPERIMENTAL CHILDREN
(Number of Children)

NUMBER OF TIMES OBSERVED	HOURS OF PARA ATTENTION				
	NONE	FEWER THAN 5 HRS.	5-10	NO ANS.	TOTAL
None	*1317	108	61	136	1452
1	* 86	23	8	17	134
2	4	4	6	1	15
TOTAL	1407	135	75	154	1771

*These children were classified as "not attended to." All others in these tables were "attended to."

4. Natt. These are the children who were not classified as Att. They came from both Cont. and Exp. classes.

5. Natt. Exp. These are the children who were in the experimental classes (classes with paraprofessionals), but who are not identified as having been specifically attended to by the paraprofessionals. This is a particularly significant group to compare with Att., since they share the same teacher and classroom.

Thus, we will divide the total sample of children up three ways:

Cont. + Exp. = All

Att. + Natt. = All

Cont. + Att. + Natt. Exp. = All

There are five comparisons that can usefully be made among these five groups. The analysis will report the most interpretable ones. The five are:

Cont. vs. Exp.

Att. vs. Natt.

Cont. vs. Att.

Cont. vs. Natt. Exp.

Att. vs. Natt. Exp.

B. Improvement Scores

1. Reading. Each child for whom there are reading data took one of two reading pre-tests, and one of two reading post-tests, each consisting of two sub-tests, thus giving him one of four possible combinations of pre- and post-tests. Since these tests were noncommensurate, IED converted all test results to percentiles, and then calculated separate "Improvement" scores for each child of the two reading sub-tests. The Imp. is the pre-test percentile minus the test percentile. The two sub-tests were Word Knowledge (W.K.) and Reading. To avoid confusion between using the word "Reading" to mean either the whole test (both parts) or just reading sub-test, IED has adopted the convention of using "Reading" to mean the whole test, and "Readingsub" to mean the particular reading sub-test.

2. Arithmetic. The Imp. scores for arithmetic were also computed as percentiles. Here there were three sub-tests: Computation, Concepts, and Problem Solving. Improvement scores were computed for each child for each sub-test and were combined to get a single score for airthmetic.

3. Comparing Groups. Groups are compared by taking the difference in their Imp. scores. Thus, since both groups may improve or both may slip back, the difference between the groups is a relative measure, not an absolute one.

C. Improvement Groups

1. Children. For each sub-test in reading and for each sub-test in arithmetic, each child was ranked by Imp. A child was assigned to the Upper Group for that sub-test if he was in the top 25 percent of Imp. scores for all children (on whom IED had Imp. scores); he was assigned to the Lower Group if his Imp. score was in the lower 25 percent. Otherwise, he was assigned to the Middle Group.

   When IED combined data for all sub-tests to get Reading Imp. or Arithmetic Imp., the child was put in Upper if he was in Upper on at least one sub-test and not in Lower for any sub-test. Since there were three sub-tests in arithmetic, more than 25 percent are in Lower.

2. Classes. Since each paraprofessional and each teacher was uniquely associated with a particular class, IED needed a way of assigning each class to either Upper, Middle, or Lower Imp. (separately for reading and for arithmetic). This was done by examining each class and seeing how many of its pupils were in the Upper or the Lower Imp. group. This was done separately for each of the sub-tests, two for reading, three for arithmetic. Any class that had an extremely high proportion ($p < 0.05$) of pupils in either Upper or Lower (and hardly any in the other) was assigned to that group for that sub-test. When sub-tests for reading or arithmetic were combined, any class that was Upper in some sub-test and Lower in any other sub-test was put in Middle; otherwise it was put in Upper if it was Upper for at least one sub-test, or in Lower if it was Lower for at least one sub-test.

D. Affective Scores

Each child (for whom there are complete data) took two tests of affective behavior: "Omnibus" and "Pictures." "Omnibus" yields two separate scores, one for self-esteem (E), and one for attitude toward school (A). "Pictures" yields separate scores for five variables. These are aesthetics (A), reading (R), language arts (L), mathematics (M), and science (S). The two scores on "Omnibus" are independent, but the five scores on "Pictures" are related in that a child cannot score high on all five or low on all five. These latter have nearly a constant sum.

E. Affective Groups

Although there are no pre-tests for the seven affective tests (two "Omnibus" and five "Pictures"), the data were treated in the same way as reading and arithmetic scores. Upper, Middle, and Lower groups are defined on quartiles of performance. There is no combining, since each of the seven scores is treated separately.

II. Scoring

A. Levels in Reading

Of the 2,821 children in the study, there were pre-test data in reading on a little over two-thirds. Some of the children (1,333) had taken Primary I, Form B, as the pre-test, and others (604) had taken Primary II, Form B. For some of the children IED had obtained raw scores and for some grade equivalents (GE). Some of the post-tests were Primary II, Form F, and some were Elementary, Form F. Again, some of these scores were reported as raw scores and some as grade equivalents. For pre-test data then, there were four classes of data: Primary I, raw score; Primary I, GE; Primary II, raw score; and Primary II, GE.

B. Conversion into Percentiles

Raw scores were converted into grade equivalents by using data supplied by Harcourt, Brace & Javonovitch. These were calculated in terms of national standards, except for the Primary I, Form B reading scores, which were converted in terms of New York standards by means of a special conversion table for "End of Grade 1." The children were near the end of Grade 2 when they took the reading pre-test, with the result that their pre-test scores were considerably higher than their post-test scores, which were converted more appropriately. To obtain comparable pre- and post-test scores, with the goal of obtaining a measure of change, the grade equivalent scores were re-converted into raw scores, transformed into standard scores, and calculated as percentiles. Since published conversion tables are discontinuous in several areas, in-between values are interpolated by curve fitting to the cumulative ogive. (See Table C and Chart A.)

TABLE C

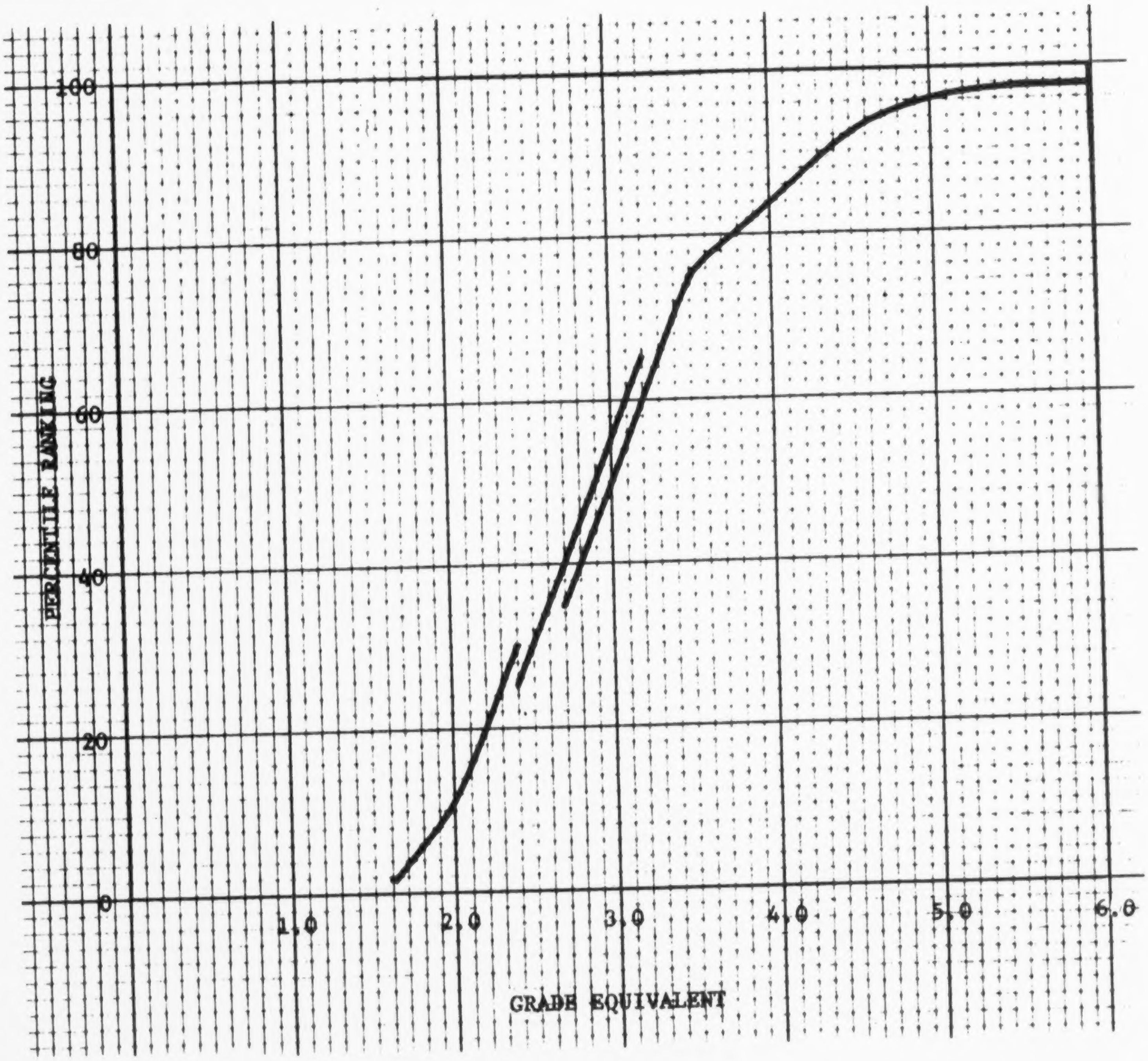
READING TEST, FORM B, PRIMARY II

DERIVED CONVERSION - GRADE EQUIVALENT TO PERCENTILE RANK

GRADE EQUIVALENT	PERCENTILE RANK	
	ORIGINAL	INTERPOLATED
8.5		
7.5		
6.5	98	
5.5		97
4.9	95	
4.6		92
4.4	90	
4.2		87
4.0		84
3.8	80	81
3.7		78
3.5	75	73
3.4	70	
3.3	65	67
3.2	65	63
3.1	60	59
3.0	55	
2.9	50	
2.8	45	
2.7	40	
2.7	35	
2.6	35	
2.6		
2.5	30	
2.5		
2.4	30	
2.4	25	
2.3	25	21
2.3		
2.2	20	17
2.2	20	
2.2		
2.1		
2.1	15	13
2.0		
2.0	10	
1.9		7
1.9		
1.8	5	
1.8		
1.7		3
1.7		
1.6	2	
1.5	<2	
1.4	<2	

CHART A

HARCOURT-BRACE
CONVERSION DATA
GRADE EQUIVALENT TO PERCENTILE RANKING
READING TEST, FORM B, PRIMARY II
END OF GRADE 2 FOR NEW YORK CITY



Once percentiles of all test data were calculated, IED could regroup the reading data into four "levels" in terms of which particular combination of pre- and post-test the child had taken:

- Level 1--Prim. I (Pre) and Primary II (Post) (N=807)
- Level 2--Prim. II (Pre) and Primary II (Post) (N=165)
- Level 3--Prim. I (Pre) and Elementary (Post) (N=398)
- Level 4--Prim. II (Pre) and Elementary (Post) (N=440)

Within any one level, the pre- and post-scores could be compared meaningfully. Thus, Level 1 had a highly negative "improvement" score, since the conversion table used yielded excessively high percentiles for the pre-test score. But this does not affect the comparison of improvement scores between "attended to" and "not attended to" children within Level 1.

Thus, for each of the four levels within each of the two sub-tests, "improvement" scores could be calculated. These were simply the post-test scores minus the pre-test scores. All of the statistical tests were made separately within levels, so that the comparison of the mean improvement of one group with another (the t test) was appropriate.

C. Affective Scoring

The two affective instruments used--"Omnibus" and "Pictures"--were accompanied by a scoring key. Each of the 24 questions on "Omnibus" was relevant to one or the other of its two variables (self-esteem and attitude toward school). Each question received a score of 0, 1, or 2, depending on the specific answer. The final measure used was the total raw score for the variable as a percent of its maximum.

"Pictures" required the child to choose one of three activities as the "answer" to each question. These three were drawn from a set of five (aesthetics, reading, language arts, math, science). Thus, this test produced relative measures (a child could not achieve a high or a low score in all five areas). Again, the final measure used was the raw score for each variable as a percent of its maximum.

D. Missing Data

1. Reading and Arithmetic Tests. For each child, for each of the five sub-tests (three in Math, two in Reading), we either had a score or not. Missing data were coded to indicate the particular sub-test (or tests) for which we had no data. When data were combined over sub-tests (as in average Math Pre-test), the percentiles were averaged. If a particular child had missing data for some sub-tests, they were omitted in the averaging process, counting neither in the numerator or in the denominator.

2. Affective Tests. Since we did the scoring on the affective tests, we had separate answers for each item. Some children missed an entire test, some did not answer some items in a test, and did answer others. We calculated a score for any particular variable (out of the seven) if 75% or more of the items that scored towards that variable had been answered. In these cases the final measure (%) was computed against the maximum that could have been obtained, considering only the items actually answered.

3. Other Data. The general procedure in the entire analysis was to use all the data available for each test or comparison. Thus, the sample sizes fluctuate for the various t tests and other analyses.

E. Combining over Levels and Sub-tests

In combining over levels, two methods were used: one for combining significance tests, the other for combining differences. The t tests used within levels had their degrees of freedom (df) calculated by the separate-variance method rather than the less conservative pooled-variance method. The degrees of freedom so determined were used as a weighting factor in calculating average differences when levels were combined in reading. Thus, the assumption was made, not that Level 1 was equivalent to Level 2 (even in percentiles), but that the difference between two groups in Level 1 could be averaged with the difference between the same two groups in Level 2.

In combining t statistics, the procedure was to calculate TBAR (an "average t") by first computing a simple weighted average t for the groups (weighted by df) and then dividing by the weighted number of t's being averaged (weighted by the square of the df). For computational purposes the formula used was

$$\text{TBAR} = (a_1t_1 + a_2t_2 + \ldots + a_nt_n)/(a_1^2 + a_2^2 + \ldots + a_n^2)^{\frac{1}{2}} ,$$

where $a_1, a_2, \ldots, a_n$ are the degrees of freedom of $t_1, t_2, \ldots, t_n$ respectively.

This has the effect of accounting for the extra sample size as additional groups were added to TBAR, and is derived from the fundamental definition of t .

This same procedure was used when combining over sub-tests to get a single significance test for reading or for arithmetic. In the affective data, no such combining was necessary. In the arithmetic data, the only combining was over sub-tests. There was no "level" problem, since all the pre-tests were the same, as were all the post-tests.

III. Levels of Significance

A. The data selected for detailed analysis and discussion were those with probabilities (of the null hypothesis) of 0.01 or less in reading and arithmetic and 0.05 or less in affective areas. Thus, there is a chance that out of so many tested relationships, these differences are only accidents of chance variation, not "real." To adopt the multiple hypothesis test (decrease alpha appropriately by the power of the number of tests) assumes that the comparisons are independent, which they clearly are not. It is better and more illuminating to to examine each statistically significant result for substantive significance.

B. The _t_ tests are interpreted (in calculating their probabilities) from a one-tailed distribution, since the direction of the difference is important, as well as its magnitude.

C. To aid in interpreting _t_, Table D shows the probability associated with large values of _t_.

TABLE D
PROBABILITIES FOR LARGE VALUES OF _t_

_t_	PROBABILITY OF A _t_ AT LEAST THIS LARGE*
1.0	0.159
2.0	0.022 8
3.0	0.001 85
4.0	0.000 031 7
4.5	0.000 003 10
5.0	0.000 000 287
5.5	0.000 000 019 0
6.0	0.000 000 000 987
7.0	0.000 000 000 001 28
8.0	0.000 000 000 000 004 38

*one-tailed test

APPENDIX E

Tables Showing Results on Dependent and Independent Variables for Various Groups of Children Classroom Paraprofessionals

TABLE	TITLE
I	Total Sample Characteristics
IIa	Sample Characteristics by Group (in percent)
IIb	Sample Characteristics by Group (in percent)
III	Reading Improvement - All Children
IV	Reading Improvement - Blacks Only
V	Math Improvement - All Children
VI	Math Improvement - Blacks Only
VII	Affective Scores - All Children
VIII	Affective Scores - Blacks Only
IX	Group Differences in Affect - All Children
X	Group Differences in Affect - Blacks Only
XI	Rated Potential vs. Para Attention - All Children
XII	Significance Test of Improvement Groups vs. Demographic Data
XIII	Improvement Level by Para Attention: Mathematics - All Children
XIV	Improvement Level by Race: Reading - Control Children
XV	Improvement Level by Student Potential: Mathematics - Control Children
XVI	Improvement Level by Race: Mathematics - Experimental Children
XVII	Improvement Level by Sex: Reading - Attended-to Children
XVIII	Improvement Level by Student Potential: Reading - All Not-Attended-to Children

TABLE	TITLE
XIX	Improvement Level by Student Potential: Mathematics - All Not-Attended-to Children
XX	Improvement Level by Race: Mathematics - All Not-Attended-to Children
XXI	Improvement Level by Student Potential: Mathematics - Experimental Not-Attended-to Children
XXII	Improvement Level by Race: Mathematics - Experimental Not-Attended-to Children
XXIII	Improvement Level by Student Potential: Mathematics - All Children, Black
XXIV	Improvement Level by Student Potential: Mathematics - Control Children, Black
XXV	Improvement Level by Student Potential: Mathematics - Control Children, Black
XXVI	Improvement Level by Student Potential: Mathematics - Not-Attended-to Children, Black
XXVII	Improvement Level by Student Potential: Mathematics - Experimental Not-Attended-to Children, Black
XXVIII	Summary of Significant Tests - Improvement Groups Vs. Demographic Data
XXIX	Significance Tests of Improvement Groups vs. Affective Groups
XXX	Summary of Significant Tests - Improvement Groups vs. Affective Groups
XXXI	High and Low Improvement Classes - Reading and Mathematics All Children, Control
XXXII	High and Low Improvement Classes - Reading and Mathematics - All Children, Experimental
XXXIII	High and Low Improvement Classes - Reading and Mathematics - Black Children, Control
XXXIV	High and Low Improvement Classes - Reading and Mathematics - Black Children, Experimental

TABLE	TITLE
XXXV	Characteristics of All Pupils in Sample
XXXVI	Background Characteristics of Paraprofessionals
XXXVII	Job Characteristics of Paraprofessionals
XXXVIII	Background Characteristics of Teachers

TABLE IIb

SAMPLE CHARACTERISTICS BY GROUP
(In Percent)

CHARACTERISTICS	READING			MATH		
	ATT	NATT	NATTEXP	ATT	NATT	NATTEXP
Number in Group	375	2446	1396	368	2453	1403
Sex	100.0	100.0	100.0	100.0	100.0	100.0
Male	62.7	47.1	47.0	64.9	46.8	46.5
Female	34.4	47.0	45.0	32.1	47.3	45.5
No Answer	2.9	5.9	8.0	3.0	5.9	8.0
Race	100.0	100.0	100.0	100.0	100.0	100.0
Black	37.6	44.3	40.6	38.3	44.2	40.4
Puerto Rican	41.9	30.1	29.2	43.8	29.8	28.7
White	5.1	6.3	7.3	4.3	6.4	7.5
Span. Sr. Name	5.3	2.6	2.4	4.9	2.7	2.6
Oriental	0.5	0.7	0.6	0.5	0.7	0.6
Other	1.6	2.1	1.6	1.6	2.1	1.6
No Answer	8.0	13.9	18.2	6.5	14.1	18.5
Potential[a]	100.0	100.0	100.0	100.0	100.0	100.0
High	13.6	24.6	21.6	11.1	24.9	22.2
Average	39.5	44.0	42.9	40.5	43.9	42.6
Low	41.6	17.6	17.7	43.2	17.4	17.4
No Answer	5.3	13.7	17.7	5.2	13.7	17.7
Absence	100.0	100.0	100.0	100.0	100.0	100.0
0 - 6 Days	23.5	26.3	25.1	25.0	26.0	24.7
7 or More Days	60.5	52.6	48.4	60.1	52.7	48.5
No Answer	16.0	21.1	26.5	14.9	21.3	26.7

[a] Teachers' Ratings

TABLE III

READING IMPROVEMENT

ALL CHILDREN

GROUPS[a]	RELATIVE IMPROVEMENT (Percentiles)	TEST	"t" BAR[b]
Exp./Cont.	9.55	Reading	10.85
Att./Cont.	4.70	Reading	2.92
Natt.Exp./Cont.	10.73	Reading	11.57
Natt.Exp./Att.	4.60	Reading	3.02
Exp./Cont.	10.98	Word Knowledge	8.96
Att./Cont.	5.28	Word Knowledge	2.61
Natt.Exp./Cont.	12.13	Word Knowledge	9.21
Natt.Exp./Att.	4.75	Word Knowledge	2.00
Exp./Cont.	8.06	Readingsub	6.34
Att./Cont.	4.06	Readingsub	1.49
Natt.Exp./Cont.	9.24	Readingsub	7.09
Natt.Exp./Att.	4.45	Readingsub	2.29

[a] The first listed group improved more than the second listed one.

[b] The numbers in this column are the values of the "t" statistic for each comparison. Each of these t values has several hundred degrees of freedom and so can be interpreted as a z. A value of 1.0 indicates a probability of 0.16 that the observed difference is the result of chance. A value of 1.5 indicates a probability of 0.067 that the observed difference is due to chance. A value of 2.0 indicates a probability of 0.023; a value of 3 indicates a probability of 0.0014. A table of t vs probability is given in Appendix D, p. A-97 along with the method of combining t values from various tests.

TABLE IV

READING IMPROVEMENT

BLACKS ONLY

GROUPS[a/]	RELATIVE IMPROVEMENT (Percentiles)	TEST	"t" BAR[b/]
Exp./Cont.	10.43	Reading	7.98
Att./Cont	8.12	Reading	3.62
Natt.Exp./Cont.	11.17	Reading	8.04
Natt.Exp./Att.	3.90	Reading	1.74
Exp./Cont.	11.16	Word Knowledge	6.16
Att./Cont	5.91	Word Knowledge	2.05
Natt.Exp./Cont.	11.74	Word Knowledge	6.10
Natt.Exp./Att.	4.64	Word Knowledge	1.25
Exp./Cont.	9.69	Readingsub	5.13
Att./Cont.	10.51	Readingsub	3.13
Natt.Exp./Cont.	10.57	Readingsub	5.25
Natt.Exp./Att.	3.17	Readingsub	1.21

TABLE V

MATH IMPROVEMENT

ALL CHILDREN

GROUPS[a/]	RELATIVE IMPROVEMENT (Percentiles)	TEST	"t" BAR[b/]
Cont./Ext.	0.61	Mathematics	0.95
Att./Cont.	3.17	Mathematics	3.24
Cont./Natt.Exp.	1.57	Mathematics	2.38
Att./Natt.Exp.	4.71	Mathematics	4.97
Cont./Exp.	1.05	Computation	0.92
Att./Cont.	2.08	Computation	1.14
Cont./Natt.Exp.	1.87	Computation	1.56
Att./Natt.Exp.	3.94	Computation	2.22
Cont./Exp.	1.46	Concepts	1.37
Att./Cont.	3.39	Concepts	2.04
Cont./Natt.Exp.	2.71	Concepts	2.44
Att./Natt.Exp.	6.10	Concepts	3.83
Exp./Cont.	0.76	Problem Solving	0.70
Att./Cont.	4.00	Problem Solving	2.39
Cont./Natt.Exp.	0.09	Problem Solving	0.08
Att./Natt.Exp.	4.10	Problem Solving	2.57

TABLE VI

MATH IMPROVEMENT

BLACKS ONLY

GROUPS[a]	RELATIVE IMPROVEMENT (Percentiles)	TEST	"t" BAR[b]
Cont./Exp.	2.04	Mathematics	2.21
Att./Cont.	1.60	Mathematics	2.29
Cont./Natt.Exp.	3.05	Mathematics	3.19
Att./Natt.Exp.	5.29	Mathematics	3.64
Cont./Exp.	3.61	Computation	2.15
Cont./Att.	0.25	Computation	0.08
Cont./Natt.Exp.	4.42	Computation	2.52
Att./Natt.Exp.	4.17	Computation	1.45
Cont./Exp.	2.16	Concepts	1.44
Att./Cont.	2.37	Concepts	1.01
Cont./Natt.Exp.	3.24	Concepts	2.06
Att./Natt.Exp.	5.61	Concepts	2.41
Cont./Exp.	0.27	Problem Solving	0.18
Att./Cont.	4.62	Problem Solving	1.79
Cont./Natt.Exp	1.46	Problem Solving	0.92
Att./Natt.Exp.	6.07	Problem Solving	2.43

TABLE VII
AFFECTIVE SCORES - ALL CHILDREN
(Group Averages)

	EXP	ATT	CONT	NATT.EXP
Omnibus E	59.1	57.6	60.3	59.5
Omnibus A	62.6	62.0	62.5	62.7
Picture A	42.6	41.4	42.9	43.0
Picture R	22.7	22.0	22.1	22.9
Picture L	27.1	27.7	26.3	27.0
Picture M	31.1	32.7	30.6	30.6
Picture S	43.1	42.9	44.8	43.1

TABLE VIII
AFFECTIVE SCORES - BLACKS ONLY
(Group Average)

	EXP	CONT	ATT	NATT.EXP
Omnibus A	60.0	60.7	57.6	60.6
Omnibus E	61.4	62.0	60.2	61.7
Picture A	41.8	43.8	39.3	42.6
Picture R	22.0	20.6	22.8	21.8
Picture L	26.6	25.0	28.3	26.2
Picture M	31.9	31.9	33.4	31.5
Picture S	44.2	45.3	42.8	44.5

TABLE IX

GROUP DIFFERENCES IN AFFECT

(All Children)

	Comparison Groups[a]							
	EXP/CONT		ATT/CONT		NATT.EXP/CONT		ATT/NATT.EXP	
	Diff	t	Diff	t	Diff	t	Diff	t
Omnibus E	-1.25*	-2.01	-2.73	-2.94	-0.79	-1.21	-1.94	-2.17
Omnibus A	0.08	0.10	-0.47	-0.40	0.24	0.29	-0.72	-0.63
Picture A	-0.28	-0.41	-1.54	-1.37	0.09	0.12	-1.63	-1.49
Picture R	0.62	0.80	-0.09	-0.08	0.85	1.03	-0.94	-0.87
Picture L	0.89	1.62	1.45	1.78	0.71	1.22	0.73	0.92
Picture M	0.50	0.92	2.10	2.72	-0.01	-0.01	2.11	2.81
Picture S	-1.75	-2.63	-1.93	-1.97	-1.69	-2.40	-0.24	-0.25

[a] The first listed group had the higher average score.

*A "-" (minus) sign means the direction of the group differences is reversed. Thus, on Omnibus E Cont. had a higher average score than Att.

TABLE X

GROUP DIFFERENCES IN AFFECT

(Blacks Only)

	Comparison Groups[a]							
	EXP/CONT		ATT/CONT		NATT.EXP/CONT		ATT/NATT.EXP	
	Diff	t	Diff	t	Diff	t	Diff	t
Omnibus E	-0.68*	-0.78	-3.14	-2.19	-0.07	-0.08	-3.07	-2.18
Omnibus A	-0.60	-0.53	-1.79	-0.91	-0.33	-0.28	-1.46	-0.75
Picture A	-1.96	-1.84	-4.55	-2.35	-1.26	-1.14	-3.29	-1.71
Picture R	1.43	1.32	2.29	1.21	1.20	1.06	1.09	0.58
Picture L	1.61	2.04	3.25	2.48	1.16	1.41	2.09	1.60
Picture M	-0.06	-0.08	1.43	1.18	-0.47	-0.57	1.90	1.60
Picture S	-1.14	-1.20	-2.50	-1.62	-0.77	-0.77	-1.73	-1.12

[a] The first listed group had the higher average score.

* A "-" (minus) sign means the direction of the group difference is reversed. Thus, on Omnibus E Cont. had a higher average score than Exp.

TABLE XI

RATED POTENTIAL vs PARA ATTENTION - ALL CHILDREN
(Percent)

POTENTIAL RATING	GROUP				
		READING		MATH	
	ALL	ATT	NATT	ATT	NATT
All No.	1676	213	1463	215	1440
All %	100.0	100.0	100.0	100.0	100.0
Low	19.6	39.4	16.7	40.5	16.9
Medium	51.7	46.5	52.4	45.6	51.7
High	28.8	14.1	30.9	14.0	31.4

TABLE XII

SIGNIFICANCE TEST OF IMPROVEMENT GROUPS vs DEMOGRAPHIC DATA

CHILD GROUP	IMPROVEMENT IN	DEMOGRAPHIC DATA	ALL CHILDREN			BLACK CHILDREN		
			chi^2	df	sig$^{\underline{a}/}$	chi^2	df	sig$^{\underline{a}/}$
All	Reading	Sex	3.6	2		2.4	2	
		Absence	5.2	2		3.6	2	
		Potential	18.5	4	**+	12.1	4	
		Attended R	0.4	2		0.1	2	
		Attended M	0.3	2		1.5	2	
		Race	10.7	10				
	Mathematics	Sex	0.7	2		0.8	2	
		Absence	1.5	2		2.6	2	
		Potential	41.4	4	**+	47.5	4	**
		Attended R	6.8	2		2.9	2	
		Attended M	9.4	2	* +	2.9	2	
		Race	68.9	10	**+			
Control	Reading	Sex	3.6	2		4.1	2	
		Absence	1.9	2		0.9	2	
		Potential	7.7	4		5.3	4	
		Race	28.8	10	*			
	Mathematics	Sex	1.5	2		0.1	2	
		Absence	0.2	2		0.2	2	
		Potential	17.4	4	*	18.8	4	**
		Race	19.2	10				
EXP	Reading	Sex	4.3	2		0.3	2	
		Absence	4.4	2		2.7	2	
		Potential	17.2	4	* +	11.2	4	
		Attended R	11.3	2	* +	6.5	2	
		Attended M	8.2	2		1.9	2	
		Race	6.6	10				
	Mathematics	Sex	0.0	2		1.8	2	
		Absence	3.3	2		3.5	2	
		Potential	34.0	4	**+	38.9	4	**
		Attended R	8.2	2		6.6	2	
		Attended M	12.0	2	* +	6.8	2	
		Race	58.6	10	**			

(Cont'd.)

TABLE XII

SIGNIFICANCE TESTS OF IMPROVEMENT GROUPS vs DEMOGRAPHIC DATA

CHILD GROUP	IMPROVEMENT IN	DEMOGRAPHIC DATA	ALL CHILDREN			BLACK CHILDREN		
			chi^2	df	sig a/	chi^2	df	sig a/
Attended To	Reading	Sex	10.6	2	*	1.4	2	
		Absence	1.7	2		0.5	2	
		Potential	11.1	4		6.1	4	
		Race	6.7	10				
	Mathematics	Sex	2.5	2		0.3	2	
		Absence	0.4	2		3.2	2	
		Potential	5.0	4		11.6	4	
		Race	22.7	10				
Not Attended	Reading	Sex	1.1	2		2.8	2	
		Absence	5.9	2		3.0	2	
		Potential	13.4	4	*	9.3	4	
		Race	14.5	10				
	Mathematics	Sex	1.3	2		1.1	2	
		Absence	1.3	2		1.9	2	
		Potential	34.3	4	**	36.1	4	**
		Race	61.2	10	**			
Exp. Not Att.	Reading	Sex	0.9	2		0.0	2	
		Absence	4.6	2		2.1	2	
		Potential	11.7	4		9.0	4	
		Race	7.2	10				
	Mathematics	Sex	0.8	2		3.1	2	
		Absence	3.2	2		2.9	2	
		Potential	25.6	4	**	24.2	4	**
		Race	49.5	10	**			

a/ * is significant
** is very significant

+ Results presented graphically

TABLE XIII

IMPROVEMENT LEVEL BY PARA ATTENTION:

MATHEMATICS - ALL CHILDREN
(Percent)

PARAPROFESSIONAL ATTENDANCE	IMPROVEMENT GROUP			TOTAL	
	LOWER	MIDDLE	UPPER	%	NUMBER
ALL	33.5	29.9	36.6	100.0	1750
Attended To	25.1	30.6	44.3	100.0	219
Not Attended To	34.7	29.8	35.5	100.0	1531

TABLE XIV

IMPROVEMENT LEVEL BY RACE:

READING - CONTROL CHILDREN
(Percent)

	IMPROVEMENT GROUP			TOTAL	
RACE	LOWER	MIDDLE	UPPER	%	NUMBER
ALL	41.2	34.9	23.9	100.0	708
Black	43.5	32.8	23.8	100.0	400
Puerto Rican	45.8	34.7	19.6	100.0	225
White	16.2	43.2	40.5	100.0	37
Other	16.7	50.5	27.8	100.0	54

TABLE XV

IMPROVEMENT LEVEL BY STUDENT POTENTIAL:

MATHEMATICS - CONTROL CHILDREN
(Percent)

	IMPROVEMENT GROUP			TOTAL	
POTENTIAL	LOWER	MIDDLE	UPPER	%	NUMBER
ALL	32.3	28.7	39.0	100.0	659
Lower	31.3	15.2	53.5	100.0	99
Middle	31.3	29.2	39.6	100.0	336
Upper	34.4	33.9	31.7	100.0	224

TABLE XVI

IMPROVEMENT LEVEL BY RACE:

MATHEMATICS - EXPERIMENTAL CHILDREN
(Percent)

	IMPROVEMENT GROUP			TOTAL	
RACE	LOWER	MIDDLE	UPPER	%	NUMBER
ALL	34.2	30.6	35.2	100.0	984
Black	44.0	29.0	27.1	100.0	480
Puerto Rican	26.0	30.4	43.6	100.0	362
White	13.1	44.0	42.9	100.0	84
Other	36.2	25.9	37.9	100.0	58

TABLE XVII

IMPROVEMENT LEVEL BY SEX:

READING - ATTENDED TO CHILDREN
(Percent)

	IMPROVEMENT GROUP			TOTAL	
SEX	LOWER	MIDDLE	UPPER	%	NUMBER
ALL	33.8	32.9	33.3	100.0	219
Male	28.3	40.6	31.2	100.0	138
Female	43.2	19.8	37.0	100.0	81

TABLE XVIII

IMPROVEMENT LEVEL BY STUDENT POTENTIAL:

READING - ALL NOT ATTENDED TO CHILDREN
(Percent)

	IMPROVEMENT GROUP			TOTAL	
POTENTIAL	LOWER	MIDDLE	UPPER	%	NUMBER
ALL	32.2	34.0	33.8	100.0	1463
Lower	28.7	39.3	32.0	100.0	244
Middle	35.7	32.9	31.4	100.0	767
Upper	28.1	33.2	38.7	100.0	452

TABLE XIX

IMPROVEMENT LEVEL BY STUDENT POTENTIAL.

MATHEMATICS - ALL NOT ATTENDED TO CHILDREN

(Percent)

	IMPROVEMENT GROUP			TOTAL	
POTENTIAL	LOWER	MIDDLE	UPPER	%	NUMBER
ALL	34.5	29.6	35.9	100.0	1440
Lower	26.6	21.7	51.6	100.0	244
Middle	34.9	30.6	34.4	100.0	744
Upper	38.1	32.1	29.9	100.0	452

TABLE XX

IMPROVEMENT LEVEL BY RACE:

MATHEMATICS - ALL NOT ATTENDED TO CHILDREN

(Percent)

	IMPROVEMENT GROUP			TOTAL	
RACE	LOWER	MIDDLE	UPPER	%	NUMBER
ALL	34.8	29.7	35.5	100.0	1431
Black	42.3	28.4	29.3	100.0	750
Puerto Rican	27.5	30.4	42.0	100.0	483
White	16.8	38.1	45.1	100.0	113
Other	34.1	25.9	40.0	100.0	85

TABLE XXI

IMPROVEMENT LEVEL BY STUDENT POTENTIAL: MATHEMATICS - EXPERIMENTAL, NOT ATTENDED TO CHILDREN

(Percent)

	IMPROVEMENT GROUP			TOTAL	
POTENTIAL	LOWER	MIDDLE	UPPER	%	NUMBER
ALL	36.4	30.3	33.3	100.0	781
Lower	23.4	26.2	50.3	100.0	145
Middle	38.0	31.9	30.1	100.0	408
Upper	41.7	30.3	28.1	100.0	228

TABLE XXII

IMPROVEMENT LEVEL BY RACE: MATHEMATICS - EXPERIMENTAL, NOT ATTENDED TO CHILDREN

(Percent)

	IMPROVEMENT GROUP			TOTAL	
RACE	LOWER	MIDDLE	UPPER	%	NUMBER
ALL	36.7	30.4	32.9	100.0	773
Black	46.0	29.5	24.5	100.0	387
Puerto Rican	28.2	30.1	41.7	100.0	266
White	15.1	41.1	43.8	100.0	73
Other	42.6	23.4	34.0	100.0	47

TABLE XXIII

IMPROVEMENT LEVEL BY STUDENT POTENTIAL:

MATHEMATICS - ALL CHILDREN, BLACK

(Percent)

	IMPROVEMENT GROUP			TOTAL	
POTENTIAL	LOWER	MIDDLE	UPPER	%	NUMBER
ALL	41.5	28.0	30.4	100.0	838
Lower	29.7	19.4	50.9	100.0	175
Middle	43.6	28.9	27.5	100.0	436
Upper	46.7	33.0	20.3	100.0	227

TABLE XXIV

IMPROVEMENT LEVEL BY STUDENT POTENTIAL:

MATHEMATICS - CONTROL CHILDREN, BLACK

(Percent)

	IMPROVEMENT GROUP			TOTAL	
POTENTIAL	LOWER	MIDDLE	UPPER	%	NUMBER
ALL	38.2	27.1	34.6	100.0	361
Lower	30.4	14.3	55.4	100.0	56
Middle	39.1	25.5	35.3	100.0	184
Upper	40.5	35.5	24.0	100.0	121

TABLE XXV

IMPROVEMENT LEVEL BY STUDENT POTENTIAL:

MATHEMATICS - CONTROL CHILDREN, BLACK
(Percent)

	IMPROVEMENT GROUP			TOTAL	
POTENTIAL	LOWER	MIDDLE	UPPER	%	NUMBER
ALL	44.0	28.7	27.3	100.0	477
Lower	29.4	21.8	48.7	100.0	119
Middle	46.8	31.3	21.8	100.0	252
Upper	53.8	30.2	16.0	100.0	106

TABLE XXVI

IMPROVEMENT LEVEL BY STUDENT POTENTIAL:

MATHEMATICS - NOT ATTENDED TO CHILDREN, BLACK
(Percent)

	IMPROVEMENT GROUP			TOTAL	
POTENTIAL	LOWER	MIDDLE	UPPER	%	NUMBER
ALL	42.3	28.2	29.5	100.0	745
Lower	30.3	19.7	50.0	100.0	132
Middle	44.3	28.1	27.6	100.0	395
Upper	45.9	33.5	20.6	100.0	218

TABLE XXVII

IMPROVEMENT LEVEL BY STUDENT POTENTIAL:

MATHEMATICS - EXPERIMENTAL, NOT ATTENDED TO CHILDREN, BLACK

(Percent)

	IMPROVEMENT GROUP			TOTAL	
POTENTIAL	LOWER	MIDDLE	UPPER	%	NUMBER
ALL	46.1	29.2	24.7	100.0	384
Lower	30.3	23.7	46.1	100.0	76
Middle	48.8	30.3	20.9	100.0	211
Upper	52.6	30.9	16.5	100.0	97

TABLE XXVIII

SUMMARY OF SIGNIFICANT TESTS
IMPROVEMENT GROUPS vs DEMOGRAPHIC DATA

	READING			MATHEMATICS		
ALL CHILDREN	CONT	ATT	NATTEXP	CONT	ATT	NATTEXP
Sex		*				
Absence						
Potential				*		**
Attended	n.a.		n.a.	n.a.		n.a.
Race	*					**

	READING			MATHEMATICS		
BLACK CHILDREN	CONT	ATT	NATTEXP	CONT	ATT	NATTEXP
Sex						
Absence						
Potential				**		**
Attended	n.a.		n.a.	n.a.		n.a.

* - Significant
** - Very Significant
n.a. - Not Applicable

TABLE XXIX

SIGNIFICANCE TESTS OF IMPROVEMENT GROUPS vs AFFECTIVE GROUPS

CHILD GROUP	IMPROVEMENT IN	ATTITUDE TOWARD	ALL CHILDREN			BLACK CHILDREN		
			chi^2	df	sig[a]	chi^2	df	sig[a]/
All	Reading	Self Esteem	2.8	4		3.3	4	
		School	4.8	4		4.3	4	
		Esthetics	1.6	4		1.1	4	
		Reading	2.8	4		0.7	4	
		Language Arts	2.2	4		3.0	4	
		Mathematics	1.3	4		2.1	4	
		Science	2.1	4		1.2	4	
	Mathematics	Self Esteem	2.5	4		4.1	4	
		+School	6.9	4	*	9.3	4	*
		Esthetics	2.0	4		6.8	4	*
		Reading	6.5	4	*	2.7	4	
		Language Arts	2.1	4		1.3	4	
		Mathematics	3.0	4		2.6	4	
		+Science	11.6	4	**	7.0	4	*
Control	Reading	Self Esteem	2.8	4		3.5	4	
		School	6.1	4	*	2.4	4	
		Esthetics	2.2	4		1.6	4	
		Reading	4.9	4		2.6	4	
		Language Arts	2.5	4		1.0	4	
		Mathematics	1.6	4		3.7	4	
		Science	7.2	4	*	4.2	4	
	Mathematics	Self Esteem	8.0	4	*	3.9	4	
		School	2.9	4		3.4	4	
		Esthetics	1.1	4		2.2	4	
		Reading	4.6	4		0.1	4	
		Language Arts	2.6	4		1.6	4	
		Mathematics	1.4	4		2.1	4	
		Science	5.9	4	*	3.4	4	
Attended to	Reading	Self Esteem	1.6	4		2.7	4	
		+School	11.2	4	**	4.6	4	
		Esthetics	0.5	4		2.3	4	
		Reading	0.4	4		1.1	4	
		Language Arts	0.9	4		1.0	4	
		Mathematics	2.6	4		4.2	4	
		Science	5.6	4	*	1.5	4	

(Cont'd.)

TABLE XXIX

SIGNIFICANCE TESTS OF IMPROVEMENT GROUPS vs AFFECTIVE GROUPS

CHILD GROUP	IMPROVEMENT IN	ATTITUDE TOWARD	ALL CHILDREN			BLACK CHILDREN		
			chi^2	df	sig[a]	chi^2	df	sig[a]/
Experimental	Reading	+Self Esteem	6.4	4	*	11.6	4	**
		+School	9.2	4	*	11.4	4	**
		Esthetics	3.8	4		0.9	4	
		Reading	0.2	4		1.6	4	
		Language Arts	0.6	4		1.3	4	
		Mathematics	4.7	4		3.3	4	
		Science	0.1	4		4.5	4	
	Mathematics	Self Esteem	3.3	4		8.5	4	*
		+School	12.8	4	**	14.7	4	***
		Esthetics	1.5	4		6.3	4	*
		Reading	2.9	4		5.0	4	
		Language Arts	4.7	4		3.1	4	
		Mathematics	1.9	4		4.5	4	
		Science	9.5	4	*	9.4	4	*

[a]/ * is marginally significant (probability = .05 to .25)
** is significant (probability = .01 to .05)
*** is very significant (probability = less than .01)

+ Results presented graphically

(Cont'd.)

TABLE XXIX

SIGNIFICANCE TESTS OF IMPROVEMENT GROUPS vs AFFECTIVE GROUPS

CHILD GROUP		ATTITUDE TOWARD	ALL CHILDREN			BLACK CHILDREN		
			chi^2	df	sig^a	chi^2	df	sig^a
Attended to	Mathematics	Self Esteem	0.6	4		3.7	4	
		School	9.3	4	*	3.8	4	
		Esthetics	1.5	4		4.2	4	
		Reading	0.9	4		0.1	4	
		Language Arts	3.4	4		3.6	4	
		Mathematics	7.1	4	*	4.6	4	
		Science	4.5	4		5.2	4	
Not-Attended To-Exp. Only	Reading	+Self Esteem	8.8	4	*	13.5	4	***
		+School	7.7	4	*	9.1	4	*
		Esthetics	3.6	4		1.3	4	
		Reading	0.4	4		3.7	4	
		Language Arts	1.0	4		1.2	4	
		Mathematics	2.9	4		2.3	4	
		Science	2.1	4		4.6	4	
	Mathematics	Self Esteem	2.8	4		7.0	4	*
		+School	8.0	4	*	16.5	4	***
		Esthetics	3.0	4		4.7	4	
		Reading	3.6	4		6.7	4	*
		+Language Arts	7.4	4	*	5.5	4	*
		Mathematics	1.5	4		5.4	4	*
		+Science	6.6	4	*	5.5	4	*
Not-Attended To - All	Reading	Self Esteem	4.2	4		4.9	4	
		School	3.6	4		3.6	4	
		Esthetics	1.4	4		1.1	4	
		Reading	3.6	4		0.4	4	
		Language Arts	2.1	4		2.6	4	
		Mathematics	1.0	4		2.0	4	
		Science	4.2	4		1.2	4	
	Mathematics	Self Esteem	3.0	4		2.2	4	
		School	3.3	4		8.6	4	*
		Esthetics	2.9	4		5.6	4	*
		Reading	7.1	4	*	3.2	4	
		Language Arts	2.2	4		2.6	4	
		Mathematics	1.8	4		1.2	4	
		Science	8.5	4	*	4.0	4	

TABLE XXX

SUMMARY OF SIGNIFICANT TESTS

IMPROVEMENT GROUPS vs AFFECTIVE GROUPS

	READING			MATHEMATICS		
ALL CHILDREN	CONT	ATT	NATTEXP	CONT	ATT	NATTEXP
Omnibus E			*	*		
Omnibus A	*	**	*		*	*
Picture A						
Picture R						
Picture L						*
Picture M					*	
Picture S	*	*		*		*

	READING			MATHEMATICS		
BLACK CHILDREN	CONT	ATT	NATTEXP	CONT	ATT	NATTEXP
Omnibus E			***			*
Omnibus A			*			***
Picture A						
Picture R						*
Picture L						*
Picture M						*
Picture S						*

* - Marginally Significant
** - Significant
*** - Very Significant

TABLE XXXI

HIGH AND LOW IMPROVEMENT CLASSES

READING AND MATH - ALL CHILDREN, CONTROL

	IMPROVEMENT GROUP			
	LOW		HIGH	
CLASS NUMBER	READING	MATH	READING	MATH
1	X			
7	X	X		
10				X
11				X
14	X	X		
15				X
17	X			
19	X			
20	X	X		
22	X	X		
23			X	X
25	X			X
27		X		
28				X
29			X	X
32		X		
33	X			
34	X			
35				X

TABLE XXXII

HIGH AND LOW IMPROVEMENT CLASS

READING AND MATH - ALL CHILDREN, EXPERIMENTAL

CLASS NUMBER	IMPROVEMENT GROUP LOW R	LOW M	HIGH R	HIGH M
36				X
37				X
38		X		
39		X	X	
40				X
41				X
42	X			X
43				X
45		X	X	
46		X	X	
47	X	X		
48		X		
49			X	X
50				X
52		X		
53	X			X
56				X
57				X
58			X	
59			X	X
60		X	X	
61	X	X		
62		X		
63	X			
64			X	X
65		X	X	

CLASS NUMBER	IMPROVEMENT GROUP LOW R	LOW M	HIGH R	HIGH M
66			X	X
67	X			X
68	X			X
69			X	
70			X	X
71	X			
72			X	X
73			X	
74			X	X
75				X
78		X	X	
79			X	
81			X	
82		X	X	
84	X	X		
85	X			
86	X	X		
87		X	X	
89	X			
91				X
93	X	X		
94				X
96		X		
97	X	X		
98			X	

R = Reading
M = Mathematics

TABLE XXXIII

HIGH AND LOW IMPROVEMENT CLASSES

READING AND MATH - BLACK CHILDREN, CONTROL

CLASS NUMBER	IMPROVEMENT GROUP LOW READING	LOW MATH	HIGH READING	HIGH MATH
2	X			
5				X
9	X			
14	X	X		
15				X
17	X			
18				X
20	X	X		
22	X	X		
23				X
27		X		
29				X
31		X		
32		X		
33	X			
34	X			

TABLE XXXIV

HIGH AND LOW IMPROVEMENT CLASSES

READING AND MATH - BLACK CHILDREN, EXPERIMENTAL

CLASS NUMBER	IMPROVEMENT GROUP			
	LOW		HIGH	
	READING	MATH	READING	MATH
43				X
45			X	X
46			X	
47		X		
50				X
51				X
52		X		
58			X	
59			X	X
61	X	X		
62			X	
64			X	X
65		X		
66			X	
67	X			
68	X			X
78		X	X	
81			X	
82		X		
84	X	X		
86		X		
87		X		
89	X			
93	X			
94				X
96		X		
97	X	X		

TABLE XXXV
CHARACTERISTICS OF ALL PUPILS IN SAMPLE[a,b]

CHARACTERISTICS OF ALL PUPILS IN SAMPLE[a,b]

Characteristics	Total sample		Total sample		Reading			Arithmetic		
	Number	Percent	Cont. (N= 1050)	Exp. (N= 1771)	Att. (N= 375)	Natt. (Exp.& Cont.) (N= 2446)	Natt. Exp. (N= 1396)	Att. (N= 368)	Natt. (Exp.& Cont.) (N= 2453)	Natt. Exp. (N= 1403)
Sex	2821	100								
Male	1387	49	47%	50%	63%	47%	47%	65%	47%	47%
Female	1278	45	50	43	34	47	45	32	47	46
No answer	156	6	3	7	3	6	8	3	6	8
Race	2821	100								
Black	1224	43	49%	40%	38%	44%	41%	38%	44%	40%
Puerto Rican	893	32	31	32	42	30	29	44	30	29
White	174	6	5	7	5	6	7	4	6	8
Spanish surname	84	3	3	3	5	3	2	5	3	3
Oriental	19	1	1	1	1	1	1	1	1	1
Other	58	2	3	2	2	2	2	2	2	2
No answer	369	13	8	16	8	14	18	7	14	19
Potential[c]	2821	100								
High	653	23	29%	20%	14%	25%	22%	11%	25%	22%
Average	1225	43	46	42	40	44	43	41	44	43
Low	587	21	18	23	42	18	18	43	17	17
No answer	356	13	8	15	5	14	18	5	14	18
Absence	2821	100								
0 - 6 days	731	26	28%	25%	24%	26%	25%	25%	26%	25%
7 days or more	1513	54	58	51	61	53	48	60	53	49
No answer	577	20	14	24	16	21	27	15	21	27

[a] Find definition of column headings in Appendix D , p.A-87.
[b] In some cases, because of rounding off, percentages do not total 100%
[c] Teacher's ratings

TABLE XXXVI
BACKGROUND CHARACTERISTICS OF PARAPROFESSIONALS

CHARACTERISTICS	NO. OF RESPONDENTS	PERCENT
AGE	60	100.0
20 - 24	2	3.3
25 - 29	11	18.3
30 - 34	11	18.3
35 - 39	9	15.0
40 - 44	11	18.3
45 - 49	8	13.3
50 - 59	4	6.7
60 and Over	1	1.7
No Answer	3	5.0
SEX	60	100.0
Male	2	3.3
Female	58	96.7
MARITAL STATUS	60	100.0
Single	3	5.0
Married	42	70.0
Separated	8	13.3
Widowed	5	8.3
Divorced	2	3.3
NO. OF YEARS LIVED IN NEW YORK CITY	60	100.0
Less than 1	0	0.0
1 - 2	0	0.0
3 - 4	1	1.7
5 - 6	0	0.0
7 - 8	2	3.3
9 - 10	2	3.3
11 - 15	7	11.7
More than 15	48	80.0
No Answer	0	0.0

TABLE XXXVI
BACKGROUND CHARACTERISTICS OF PARAPROFESSIONALS
(Cont'd.)

CHARACTERISTICS	NO. OF RESPONDENTS	PERCENT
ETHNIC BACKGROUND	60	100.0
Am. Indian	0	0.0
Black	34	56.7
Oriental	0	0.0
Puerto Rican	11	18.3
Spanish	1	1.7
White	12	20.0
Mixed Black	0	0.0
Other	1	1.7
No Answer	1	1.7
NO. OF CHILDREN NOW IN RESIDENCE UNDER 5 YEARS OLD	60	100.0
None	47	78.3
1	6	10.0
2	3	5.0
3	0	0.0
4	0	0.0
5	0	0.0
6 or More	0	0.0
No Answer	4	6.7
NO. OF CHILDREN NOW IN RESIDENCE 5 - 12 YEARS OLD	60	100.0
None	13	21.7
1	20	33.3
2	12	20.0
3	7	11.7
4	3	5.0
5	1	1.7
6 or More	0	0.0
No Answer	4	6.7

TABLE XXXVI
BACKGROUND CHARACTERISTICS OF PARAPROFESSIONALS
(Cont'd.)

CHARACTERISTICS	NO. OF RESPONDENTS	PERCENT
NO. OF CHILDREN NOW IN RESIDENCE 13 - 18 YEARS OLD	60	100.0
None	32	53.3
1	14	23.3
2	5	8.3
3	4	6.7
4	0	0.0
5	0	0.0
6 or More	0	0.0
No Answer	5	8.3
NO. OF CHILDREN NOW IN RESIDENCE 19 YRS. OR OLDER	60	100.0
None	47	78.3
1	8	13.3
2	0	0.0
3	0	0.0
4	0	0.0
5	0	0.0
6 or More	0	0.0
No Answer	5	8.3
INCOME	60	100.0
Less tnan $3,000	16	26.7
$3,000 - $4,999	12	20.0
$5,000 - $6,999	8	13.3
$7,000 - $8,999	8	13.3
$9,000 - $11,999	5	8.3
$12,000 - $14,999	4	6.7
$15,000 or More	0	0.0
No Answer	7	11.7

TABLE XXXVI
BACKGROUND CHARACTERISTICS OF PARAPROFESSIONALS
(Cont'd.)

CHARACTERISTICS	NO. OF RESPONDENTS	PERCENT
NO. OF DEPENDENTS	60	100.0
1	6	10.0
2	9	15.0
3	12	20.0
4	11	18.3
5	9	15.0
6	9	15.0
7	1	1.7
8 or More	0	0.0
No Answer	3	5.0
EDUCATION	60	100.0
Some Grades	0	0.0
8th Grade	3	5.0
9th Grade	3	5.0
10th Grade	4	6.7
11th Grade	4	6.7
12th Grade	31	51.7
1 Yr. of College	7	11.7
2 Yrs. of College	7	11.7
3 Yrs. of College	0	0.0
4 Yrs. of College	0	0.0
5 Yrs. of College	0	0.0
No Answer	1	1.7
TITLE	60	100.0
Auxiliary Trainer	0	0.0
Educational Assist.	47	78.3
Educational Assoc.	2	3.3
Family Assist.	0	0.0
Family Worker	0	0.0
Parent Program	0	0.0
School Aide	0	0.0
Student Aide	0	0.0
Teacher Aide	0	0.0
Other	0	0.0
No Answer	11	18.3

TABLE XXXVI
BACKGROUND CHARACTERISTICS OF PARAPROFESSIONALS
(Cont'd.)

CHARACTERISTICS	NO. OF RESPONDENTS	PERCENT
HOURS WORKED	60	100.0
10 hrs. or Less	0	0.0
11 - 15 hrs.	0	0.0
16 - 20 hrs.	10	16.7
21 - 25 hrs.	15	25.0
26 - 30 hrs.	27	45.0
31 - 35 hrs.	0	0.0
36 - 40 hrs.	0	0.0
More than 40 hrs.	0	0.0
No Answer	8	13.3
AMOUNT OF TIME SPENT WITH BLACK STUDENTS	60	100.0
None	2	3.3
Some	17	28.3
About Half	16	26.7
Most	7	11.7
All	6	10.0
No Answer	12	20.0
AMOUNT OF TIME SPENT WITH ORIENTAL STUDENTS	60	100.0
None	15	25.0
Some	7	11.7
About Half	0	0.0
Most	0	0.0
All	0	0.0
No Answer	38	63.3

TABLE XXXVI
BACKGROUND CHARACTERISTICS OF PARAPROFESSIONALS
(Cont'd.)

CHARACTERISTICS	NO. OF RESPONDENTS	PERCENT
AMOUNT OF TIME SPENT WITH PUERTO RICAN STUDENTS	60	100.0
None	1	1.7
Some	18	30.0
About Half	15	25.0
Most	7	11.7
All	6	10.0
No Answer	13	21.7
AMOUNT OF TIME SPENT WITH WHITE STUDENTS	60	100.0
None	10	16.7
Some	22	36.7
About Half	1	1.7
Most	0	0.0
All	1	1.7
No Answer	26	43.3
AMOUNT OF TIME SPENT WITH STUDENTS OF ALL OTHER ETHNIC BACKGROUNDS	60	100.0
None	11	18.3
Some	6	10.0
About Half	0	0.0
Most	0	0.0
All	0	0.0
No Answer	43	71.7

TABLE XXXVII
JOB CHARACTERISTICS OF PARAPROFESSIONALS

CHARACTERISTICS	NO. OF RESPONDENTS	PERCENT
YEARS WORKED AS A PARAPROFESSIONAL	61	100.0
1 Year	10	16.4
2 Years	26	42.6
3 Years	16	26.2
4 Years	7	11.5
5 Years	1	1.6
No Answer	1	1.6
TYPE OF TRAINING	61	100.0
Pre-Service		
None	19	31.1
Part-time	2	3.3
Full-time	0	0.0
No Answer	40	65.6
In-Service		
None	0	0.0
Part-time	41	67.2
Full-time	0	0.0
No Answer	20	32.8
SUBJECT AREA TAUGHT	61	100.0
None	0	0.0
Reading	54	88.5
Lang. Arts-Eng.	17	27.9
Math or Arith.	43	70.5
History or Soc. Sci.	13	21.3
Science	7	11.5
Languages	2	3.3
Art and Music	5	8.2
Voc. Subjects	2	3.3
Phys. Ed.	9	14.8
Other	2	3.3

TABLE XXXVII
JOB CHARACTERISTICS OF PARAPROFESSIONALS
(Cont'd.)

CHARACTERISTICS	NO. OF RESPONDENTS	PERCENT
YEARS LIVED IN PRESENT NEIGHBORHOOD	61	100.0
Less than 1 yr.	1	1.6
1 - 2 yrs.	2	3.3
3 - 4 yrs.	4	6.6
5 - 6 yrs.	11	18.0
7 - 8 yrs.	7	11.5
9 - 10 yrs.	9	14.8
11 - 15 yrs.	5	8.2
More than 15 yrs.	20	32.8
No Answer	2	3.2
"WORKED WITH" FAMILIES WHO LIVE WITHIN THREE BLOCKS OF THE PARAPROFESSIONAL	61	100.0
None	9	14.8
Very few	3	4.9
Some	12	19.7
About half	14	23.0
More than half	19	31.1
No Answer	4	6.5

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TABLE XXXVIII
BACKGROUND CHARACTERISTICS OF TEACHERS

CHARACTERISTICS	NO. OF RESPONDENTS	PERCENT
AGE	95	100.0
Under 20 yrs.	0	0.0
20 - 24	49	51.6
25 - 29	22	23.2
30 - 34	9	9.5
35 - 39	3	3.2
40 - 44	3	3.2
45 - 49	3	3.2
50 - 59	2	2.1
60 or Older	2	2.1
No Answer	2	2.1
EDUCATION	95	100.0
Less than 4 yrs. Col.	1	1.1
4 yrs. Col./degree	21	22.1
Some grad./no degree at present	45	47.4
Grad. study/degree	22	23.2
Other	4	4.2
No Answer	1	1.1
YEARS TEACHING	95	100.0
Less than 1 yr.	0	0.0
1 yr.	9	9.5
2 yrs.	27	28.4
3 yrs.	15	15.8
4 yrs.	17	17.9
5 - 9 yrs.	17	17.9
10 - 15 yrs.	6	6.3
16 - 20 yrs.	1	1.1
More than 20 yrs.	2	2.1
No Answer	1	1.1

TABLE XXXVIII

BACKGROUND CHARACTERISTICS OF TEACHERS

(Cont'd.)

CHARACTERISTICS	NO. OF RESPONDENTS	PERCENT
NUMBER OF YEARS SPENT TEACHING IN AN URBAN SCHOOL SYSTEM	95	100.0
Less than 1 yr.	0	0.0
1 yr.	9	9.5
2 yrs.	27	28.4
3 yrs.	16	16.8
4 yrs.	18	18.9
5 - 9 yrs.	17	17.9
10 - 15 yrs.	5	5.3
16 - 20 yrs.	1	1.1
More than 20 yrs.	2	2.1
No Answer	0	0.0
NO. OF YRS. SPENT TEACHING IN A SUBURBAN OR SMALL TOWN SCHOOL SYSTEM	95	100.0
Less than 1 yr.	0	0.0
1 year	4	4.2
2 years	0	0.0
3 years	0	0.0
4 years	0	0.0
5 - 9 years	0	0.0
10 - 15 years	0	0.0
16 - 20 years	0	0.0
More than 20 years	0	0.0
No Answer	91	95.8
NO. OF YEARS SPENT TEACHING IN A RURAL SCHOOL SYSTEM	95	100.0
Less than 1 year	0	0.0
1 year	0	0.0
2 - 20 years	0	0.0
More than 20 yrs.	0	0.0
No Answer	95	100.0

TABLE XXXVIII
BACKGROUND CHARACTERISTICS OF TEACHERS
(Cont'd.)

CHARACTERISTICS	NO. OF RESPONDENTS	PERCENT
NO. OF YEARS SPENT TEACHING PRE-KINDERGARTEN	95	100.0
Less than 1 year	0	0.0
2 years	0	0.0
3 years	1	1.1
4 - 20 years	0	0.0
More than 20 years	0	0.0
No Answer	94	98.9
NO. OF YEARS SPENT TEACHING KINDERGARTEN	95	100.0
Less than 1 year	2	2.1
1 year	0	0.0
2 years	1	1.1
3 years	1	1.1
4 - 20 years	0	0.0
More than 20 years	0	0.0
No Answer	91	95.8
NO. OF YEARS SPENT TEACHING 1st GRADE	95	100.0
Less than 1 year	4	4.2
1 year	8	8.4
2 years	7	7.4
3 - 4 years	0	0.0
5 - 9 years	1	1.1
10 - 20 years	0	0.0
More than 20 years	0	0.0
No Answer	75	78.9

TABLE XXXVIII
BACKGROUND CHARACTERISTICS OF TEACHERS
(Cont'd.)

CHARACTERISTICS	NO. OF RESPONDENTS	PERCENT
NO. OF YEARS SPENT TEACHING 2nd GRADE	95	100.0
Less than 1 year	1	1.1
1 year	9	9.5
2 years	4	4.2
3 years	4	4.2
4 years	2	2.1
5 - 9 years	1	1.1
10 - 20 years	0	0.0
More than 20 years	0	0.0
No Answer	74	77.9
NO. OF YEARS SPENT TEACHING 3rd GRADE	95	100.0
Less than 1 year	1	1.1
1 year	33	34.7
2 years	27	28.4
3 years	16	16.8
4 years	4	4.2
5 - 9 years	13	13.7
10 or More years	0	0.0
No Answer	1	1.1
NO. OF YEARS SPENT TEACHING 4th GRADE	95	100.0
Less than 1 year	0	0.0
1 year	11	11.6
2 years	4	4.2
3 years	3	3.2
4 years	2	2.1
5 - 9 years	2	2.1
10 - 15 years	0	0.0
16 - 20 years	1	1.1
More than 20 years	0	0.0
No Answer	72	75.8

TABLE XXXVIII
BACKGROUND CHARACTERISTICS OF TEACHERS
(Cont'd.)

CHARACTERISTICS	NO. OF RESPONDENTS	PERCENT
NO. OF YEARS SPENT TEACHING 5th GRADE	95	100.0
Less than 1 year	2	2.1
1 year	10	10.5
2 years	2	2.1
3 years	2	2.1
4 or more years	0	0.0
No Answer	79	83.2
NO. OF YEARS SPENT TEACHING 6th GRADE	95	100.0
Less than 1 year	3	3.2
1 year	4	4.2
2 years	0	0.0
3 years	1	1.1
4 or more years	0	0.0
No Answer	87	91.6
NO. OF YEARS SPENT TEACHING 7th GRADE	95	100.0
Less than 1 year	1	1.1
1 or more years	0	0.0
No Answer	94	98.9
NO. OF YEARS SPENT TEACHING 8th GRADE	95	100.0
Less than 1 year	1	1.1
1 or more years	0	0.0
No Answer	94	98.9

TABLE XXXVIII
BACKGROUND CHARACTERISTICS OF TEACHERS
(Cont'd.)

CHARACTERISTICS	NO. OF RESPONDENTS	PERCENT
NO. OF YEARS SPENT TEACHING 9th GRADE OR BEYOND	95	100.0
Less than 1 year	0	0.0
1 year	1	1.1
2 years	0	0.0
3 years	0	0.0
4 years	1	1.1
5 or more years	0	0.0
No Answer	93	97.9
RATING OF PARA-PROFESSIONAL BY TEACHER	95	100.0
Excellent	22	23.2
Good	40	42.1
Fair	13	13.7
Poor	1	1.1
Very Poor	1	1.1
Limited Knowledge - Can't Say	15	15.8
No Answer	3	3.2
DESIRE TO BE ASSIGNED A PARAPROFESSIONAL FOR THE FOLLOWING YEAR (Teachers of Exp. classes only)	61	100.0
Yes	48	78.7
No	2	3.3
Willing	5	8.2
Uncertain	5	8.2
No Answer	1	1.6

TABLE XXXVIII
BACKGROUND CHARACTERISTICS OF TEACHERS
(Cont'd.)

CHARACTERISTICS	NO. OF RESPONDENTS	PERCENT
DESIRE TO BE ASSIGNED A PARAPROFESSIONAL FOR THE FOLLOWING YEAR (Teachers of Control classes only)	34	100.0
Yes	18	52.9
No	2	5.9
Willing	5	14.7
Unwilling	5	14.7
No Answer	4	11.8

APPENDIX F

Charts Showing Results On Dependent Variables
For Various Groups Of Children
Classroom Paraprofessionals

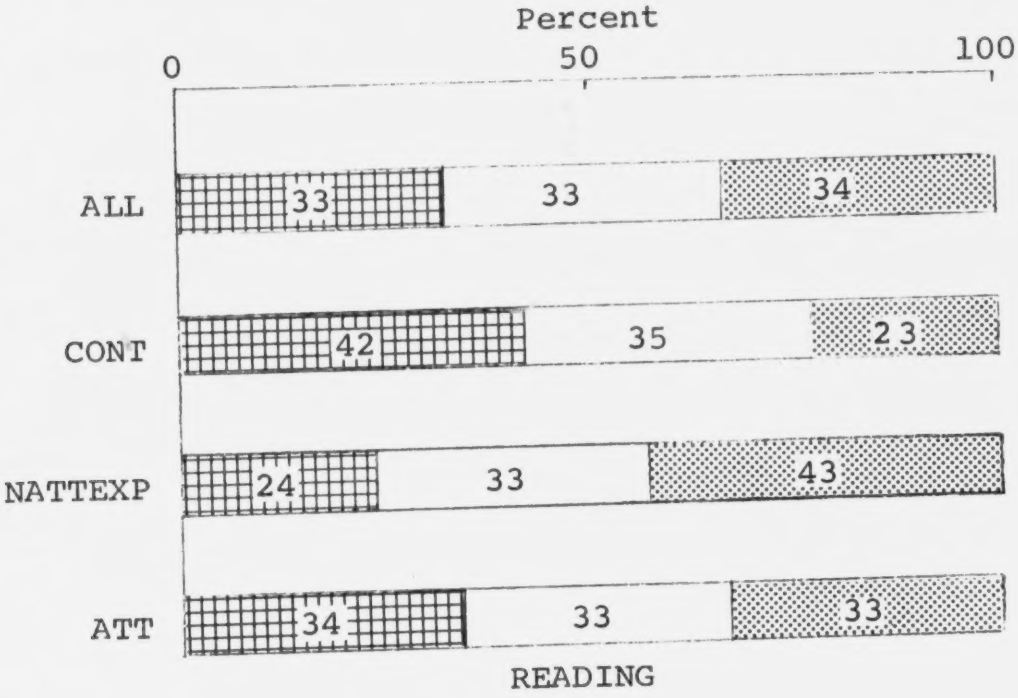
CHART	TITLE
I	Membership in Improvement Groups by Experiment Groups - All Children
II	Membership in Improvement Groups by Experiment Groups - Black Children
III	Membership in Improvement Groups by Student Potential - All Children
IV	Membership in Improvement Groups by Student Potential - All Children in Experimental Classes
V	Membership in Improvement Groups by Para Attention - All Children in Experimental Classes
VI	Membership in Improvement Groups by Para Attention - All Children
VII	Membership in Improvement Groups by Race - All Children
VIII	Membership in Improvement Groups by Affective Groups - Mathematics Improvement vs. Attitude Toward School (Omnibus II) - All Children
IX	Membership in Improvement Groups by Affective Groups - Mathematics Improvement vs. Attitude Toward Science (Picture V) - All Children
X	Membership in Improvement Groups by Affective Groups - Reading Improvement vs. Attitude Toward School (Omnibus II) - Attended-to Children
XI	Membership in Improvement Groups by Affective Groups - Reading Improvement vs. Self Esteem (Omnibus I) - Not-Attended-to Children in Experimental Classes
XII	Membership in Improvement Groups by Affective Groups - Reading Improvement vs. Attitude Toward School (Omnibus II) - Not-Attended-to Children in Experimental Classes
XIII	Membership in Improvement Groups by Affective Groups - Mathematics Improvement vs. Attitude Toward School (Omnibus II) - Not-Attended-to Children in Experimental Classes

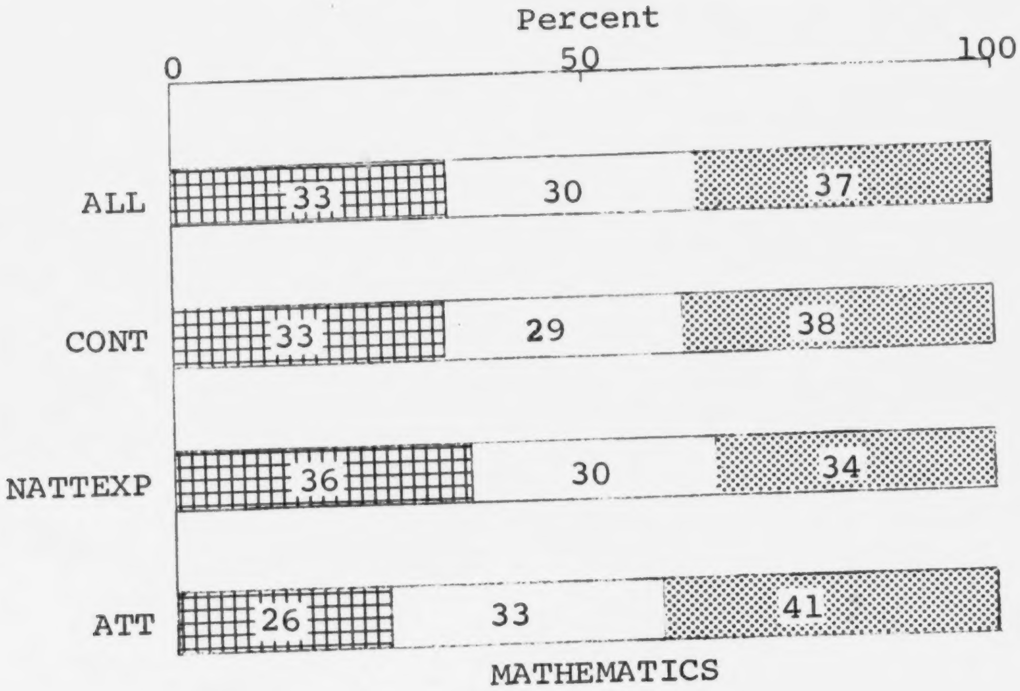
CHART	TITLE
XIV	Membership in Improvement Groups by Affective Groups - Mathematics Improvement vs. Attitude Toward Language Arts (Picture III) - Not-Attended-to Children in Experimental Classes
XV	Membership in Improvement Groups by Affective Groups - Mathematics Improvement vs. Attitude Toward Science (Picture V) - Not-Attended-to Children in Experimental Classes
XVI	Membership in Improvement Groups by Affective Groups - Reading Improvement vs. Self-Esteem (Omnibus I) - All Children in Experimental Classes
XVII	Membership in Improvement Groups by Affective Groups - Reading Improvement vs. Attitude Toward School (Omnibus II) - All Children in Experimental Classes
XVIII	Membership in Improvement Groups by Affective Groups - Mathematics Improvement vs. Attitude Toward School (Omnibus II) - All Children in Experimental Classes

CHART I [a]

MEMBERSHIP IN
IMPROVEMENT GROUPS
BY EXPERIMENT GROUPS

ALL CHILDREN





Improvement
Group*

▒ N Highest

☐ N Middle

▦ N Lowest

N - % Membership

* See Appendix
For Definition

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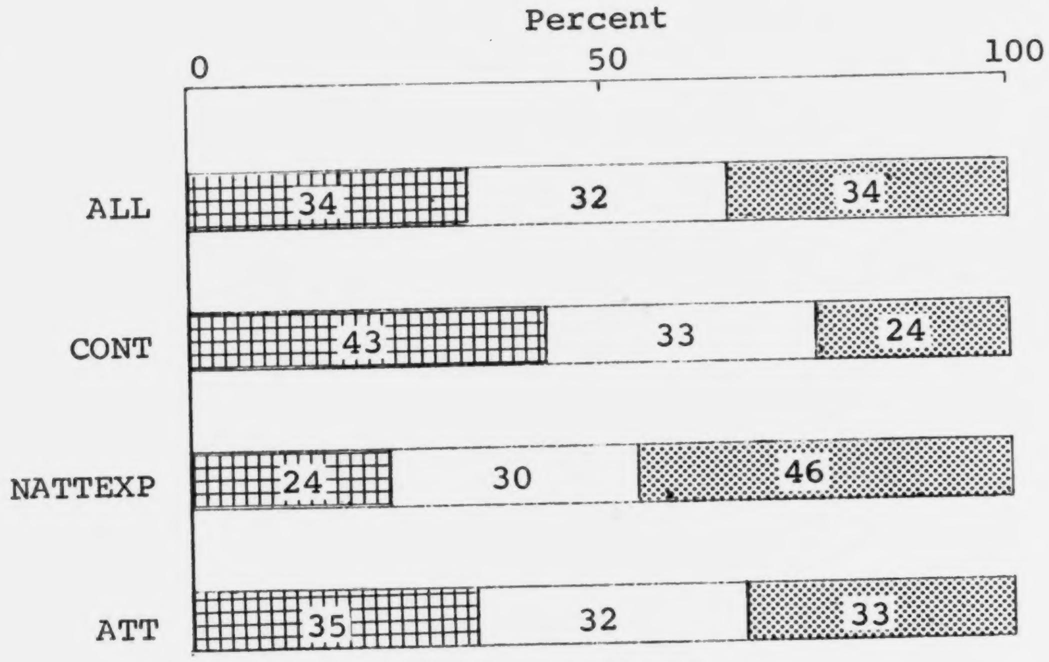
[a] Charts I through XVIII contain data for which the chi square has a statistical significance of better than .01 .

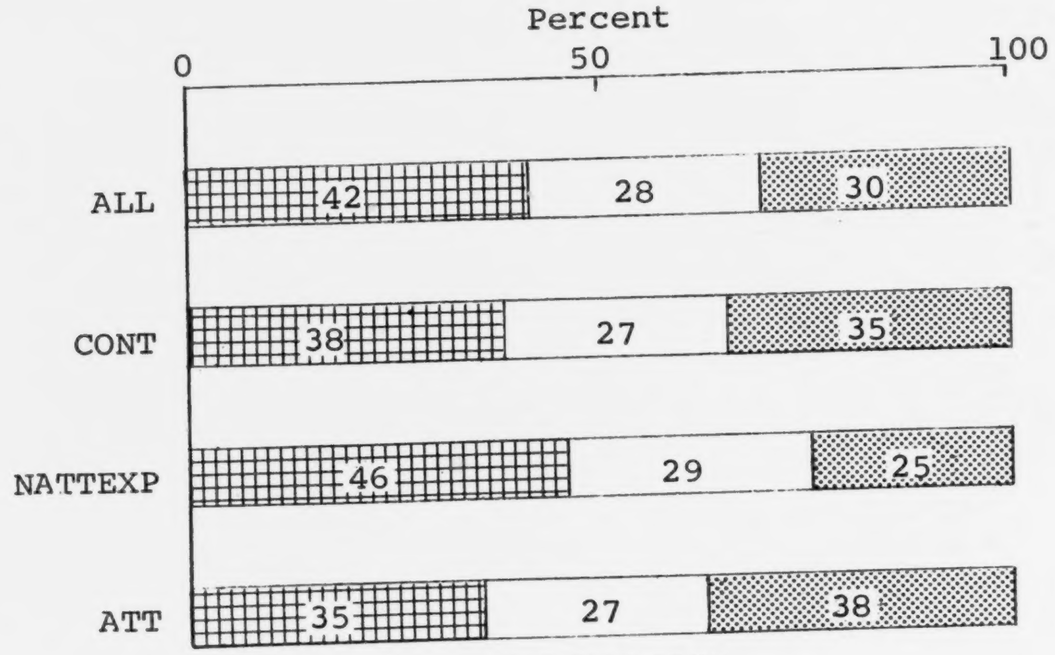
CHART II

MEMBERSHIP IN IMPROVEMENT GROUPS BY EXPERIMENT GROUPS

BLACK CHILDREN



READING



MATHEMATICS

Improvement Group*

▒ N Highest

☐ N Middle

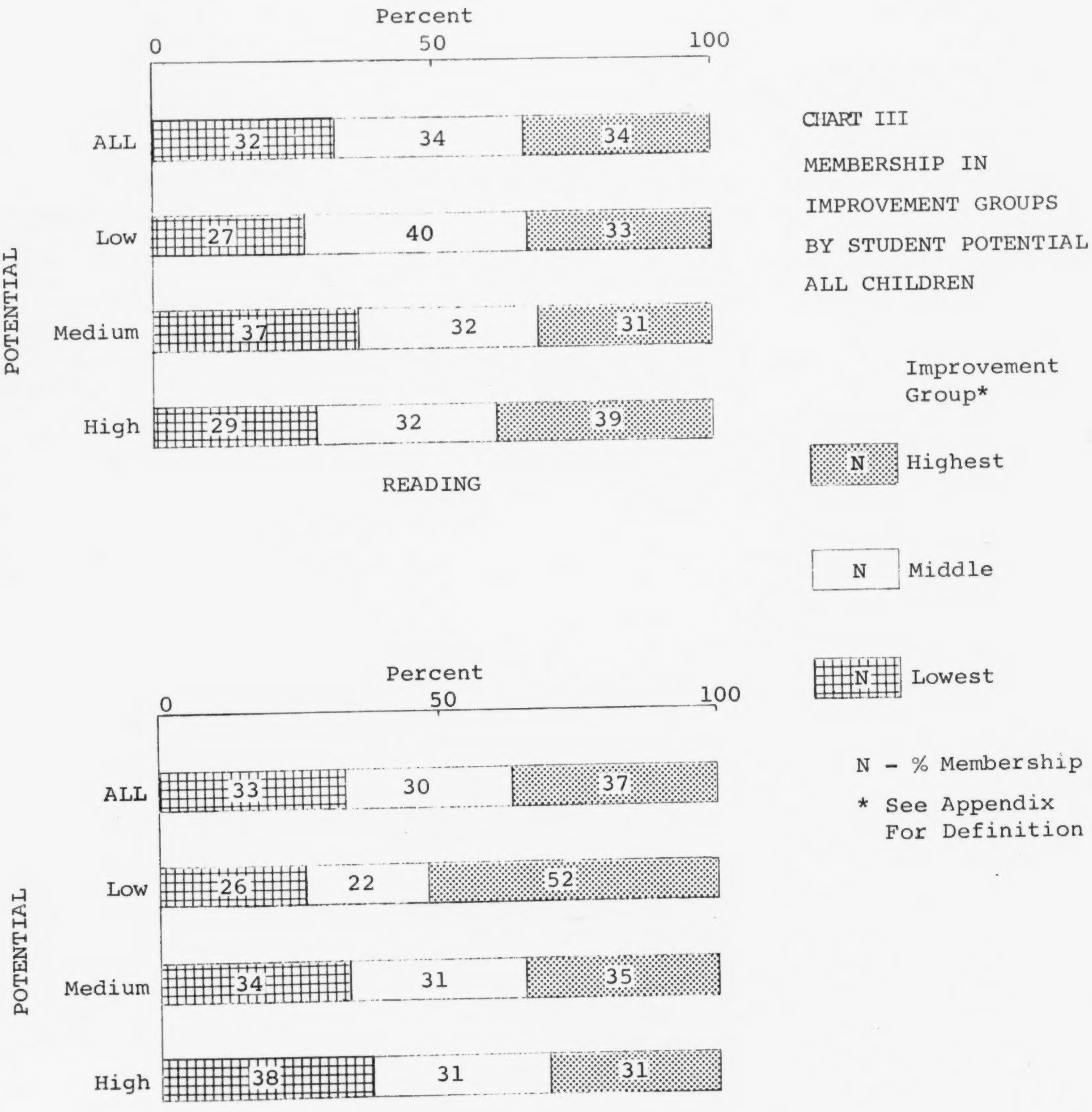
▦ N Lowest

N – % Membership

* See Appendix For Definition

CHART III

MEMBERSHIP IN IMPROVEMENT GROUPS BY STUDENT POTENTIAL ALL CHILDREN

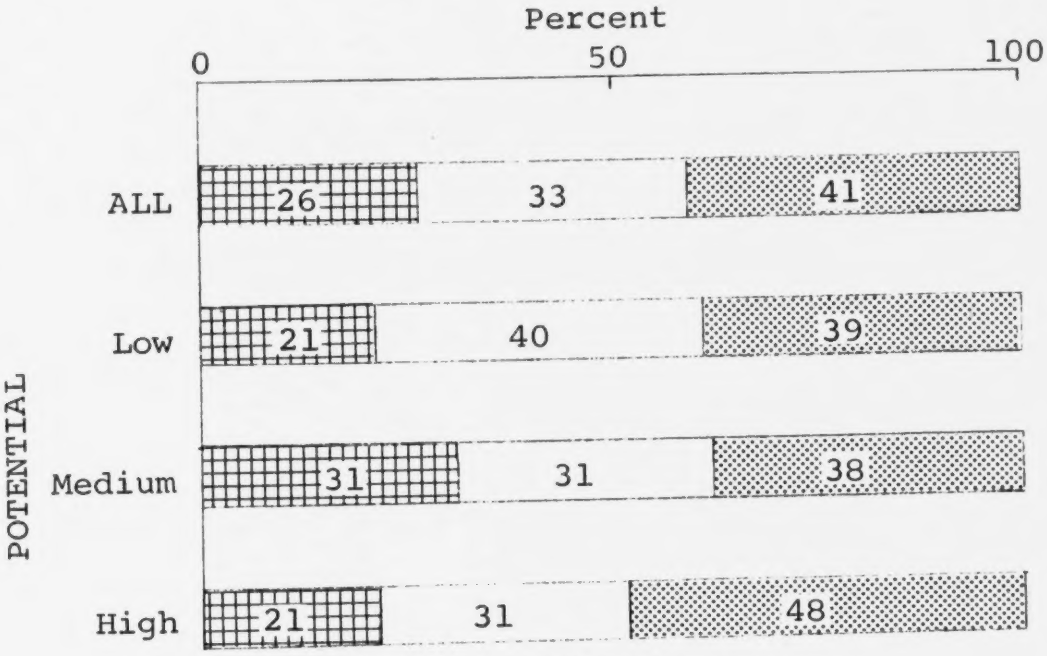


READING

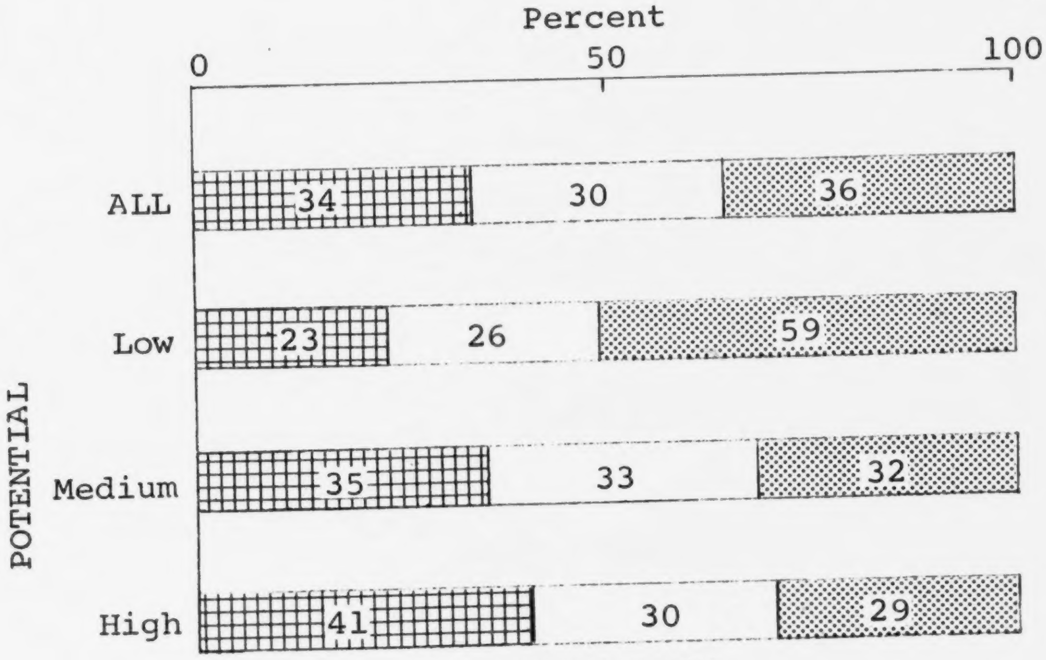
MATHEMATICS

CHART IV

MEMBERSHIP IN IMPROVEMENT GROUPS BY STUDENT POTENTIAL ALL CHILDREN IN EXPERIMENTAL CLASSES



READING



MATHEMATICS

Improvement Group*

▒ N Highest

☐ N Middle

▦ N Lowest

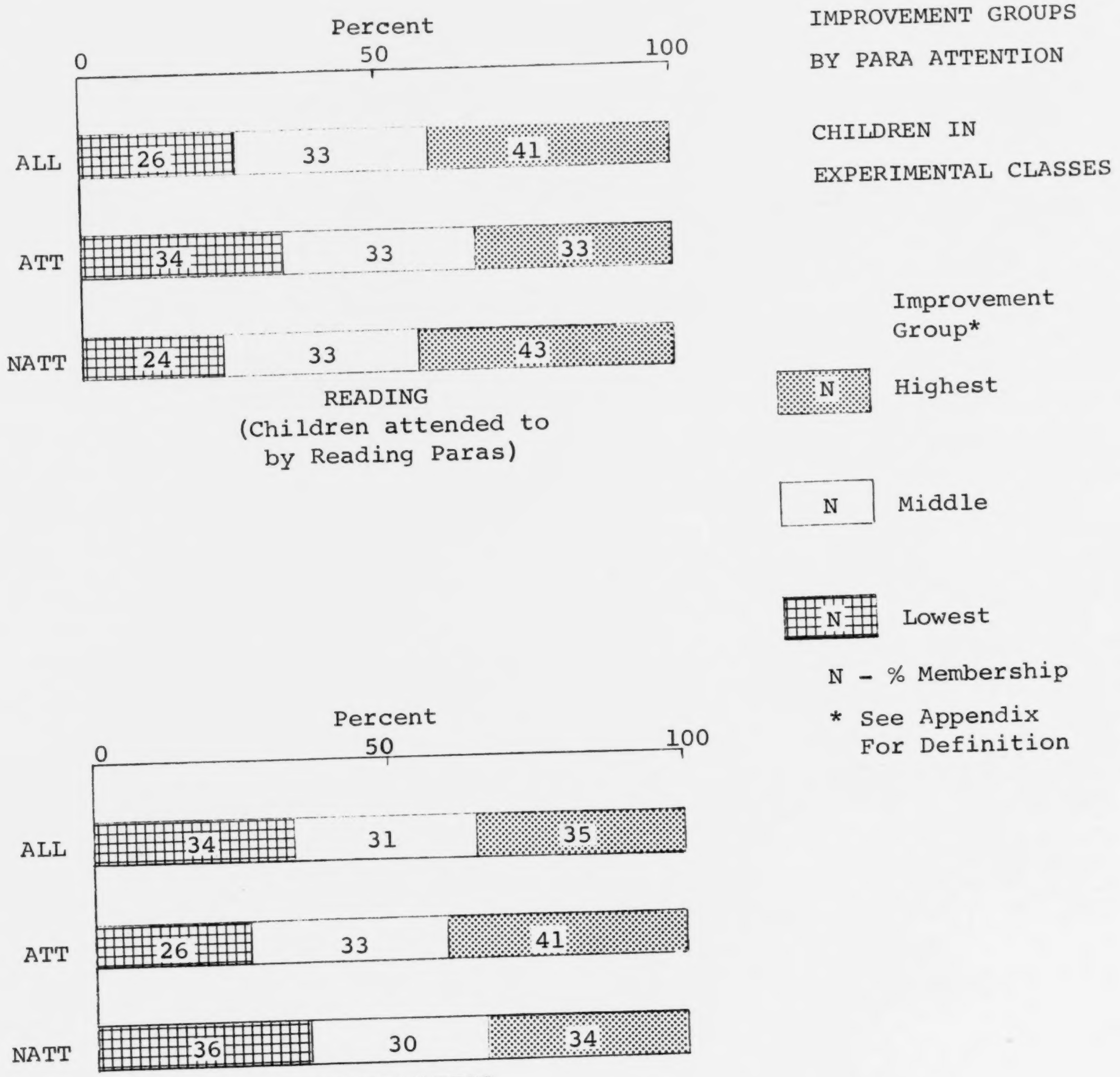
N - % Membership

* See Appendix For Definition

CHART V

MEMBERSHIP IN
IMPROVEMENT GROUPS
BY PARA ATTENTION

CHILDREN IN
EXPERIMENTAL CLASSES



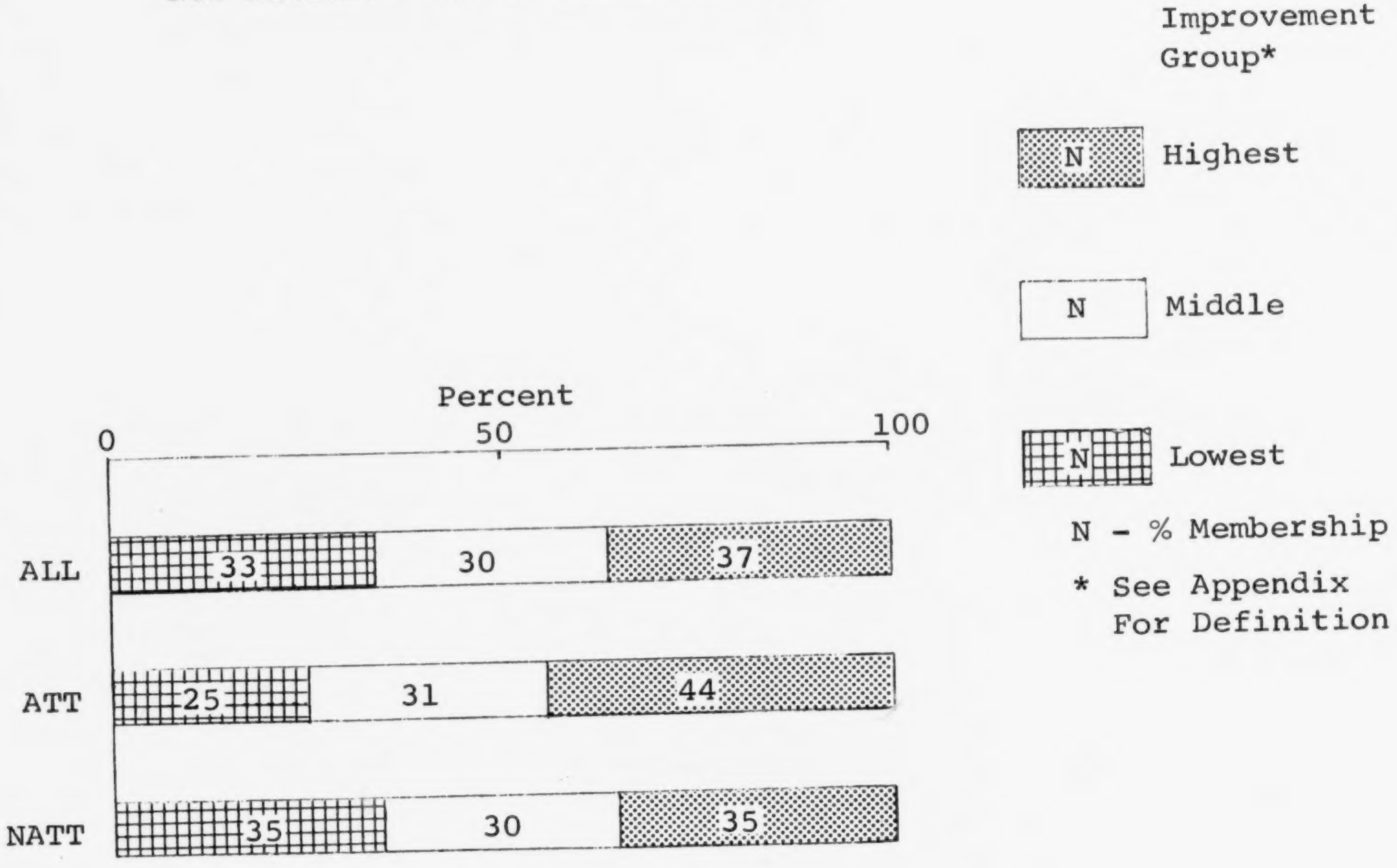
READING
(Children attended to
by Reading Paras)

MATHEMATICS
(Children attended to
by Math Paras)

CHART VI

MEMBERSHIP IN
IMPROVEMENT GROUPS
BY PARA ATTENTION
ALL CHILDREN

NO SIGNIFICANT DIFFERENCE
BETWEEN CHILDREN ATTENDED TO OR
NOT ATTENDED TO BY READING PARAS



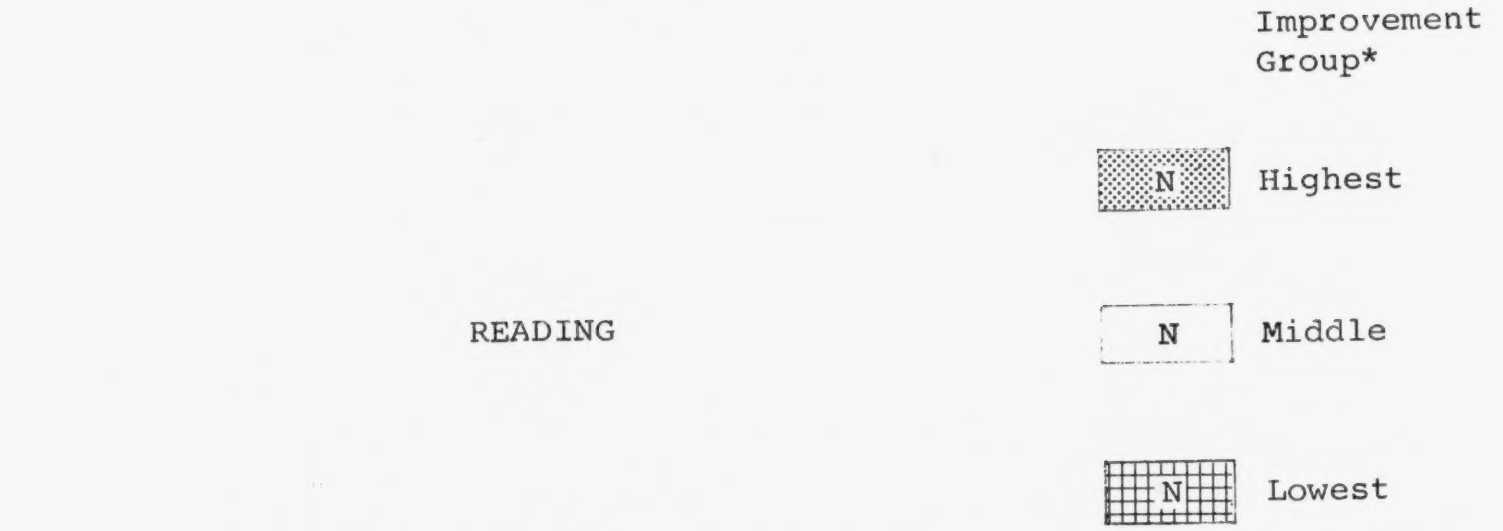
MATHEMATICS
(Children attended to
by Math Paras)

CHART VII

MEMBERSHIP IN
IMPROVEMENT GROUPS
BY RACE
ALL CHILDREN

NO SIGNIFICANT DIFFERENCE

READING



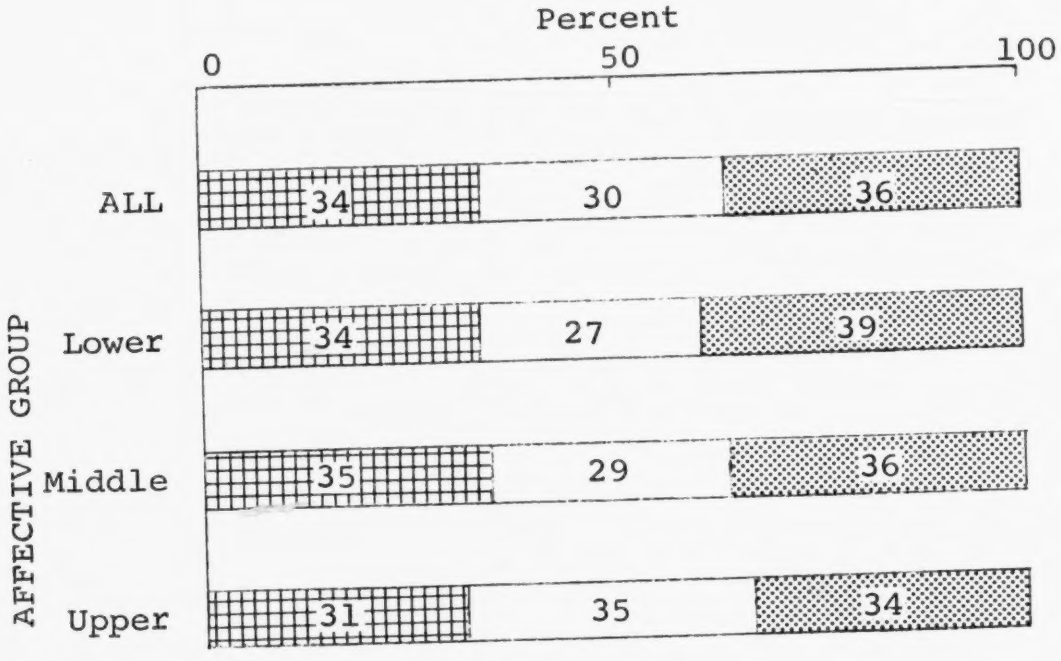
MATHEMATICS

CHART VIII

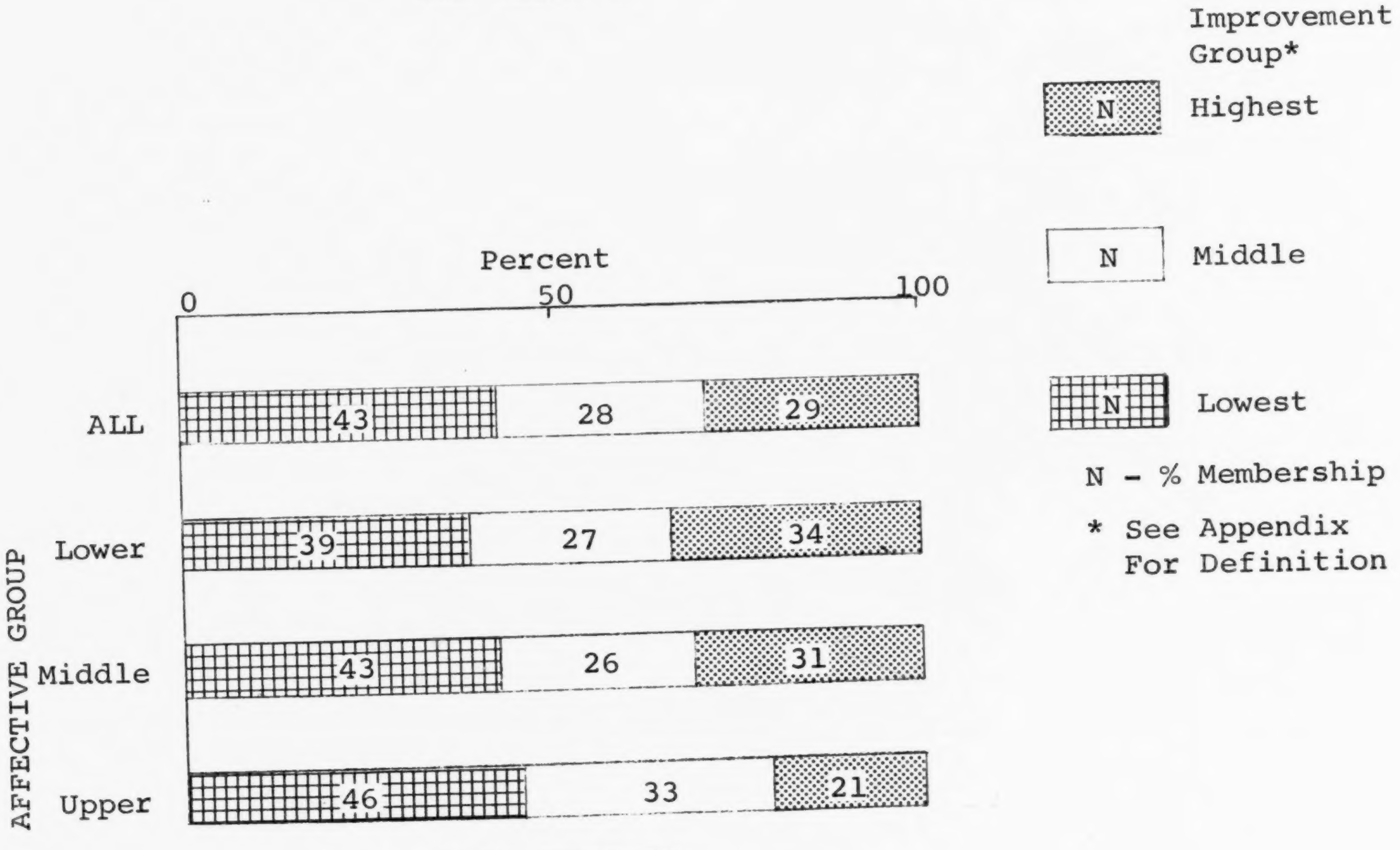
MEMBERSHIP IN IMPROVEMENT GROUPS BY AFFECTIVE GROUPS

MATH IMPROVEMENT vs ATTITUDE TOWARD SCHOOL (OMNIBUS II)

ALL CHILDREN



ALL CHILDREN



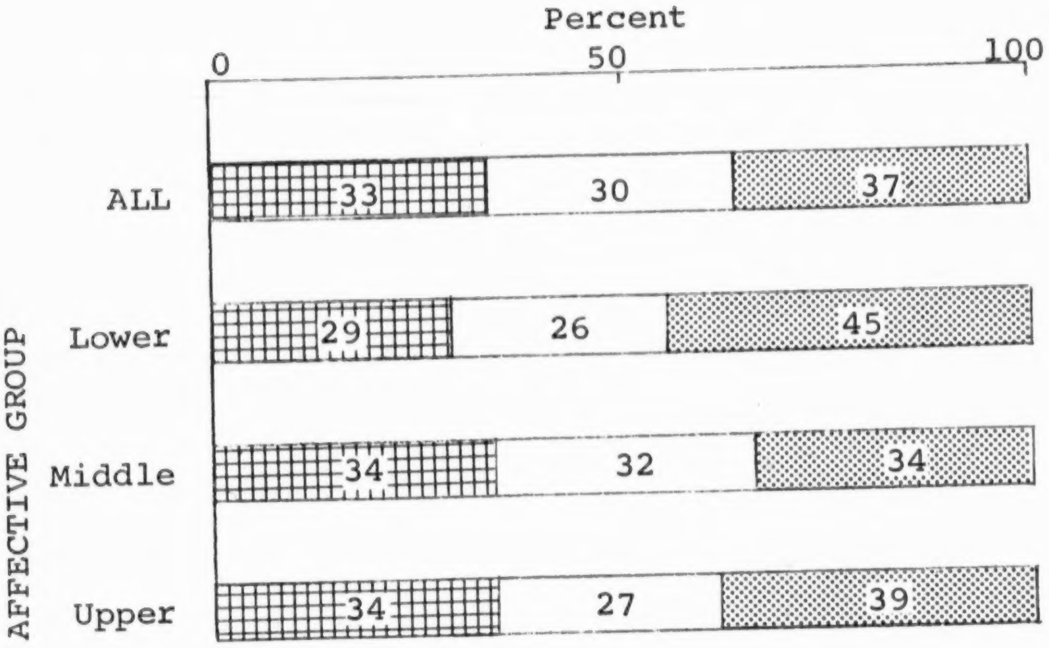
BLACK CHILDREN

CHART IX

MEMBERSHIP IN
IMPROVEMENT GROUPS
BY AFFECTIVE GROUPS

MATH IMPROVEMENT vs
ATTITUDE TOWARD SCIENCE
(PICTURE V)

ALL CHILDREN



ALL CHILDREN

Improvement
Group*

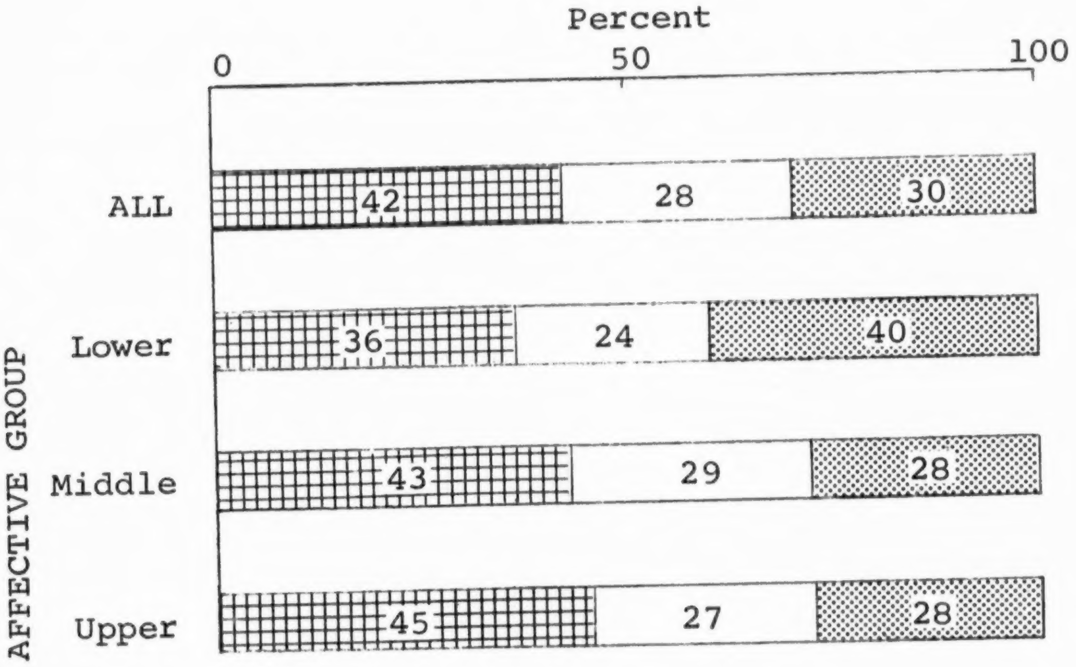
▒ N Highest

☐ N Middle

▦ N Lowest

N - % Membership

* See Appendix
For Definition



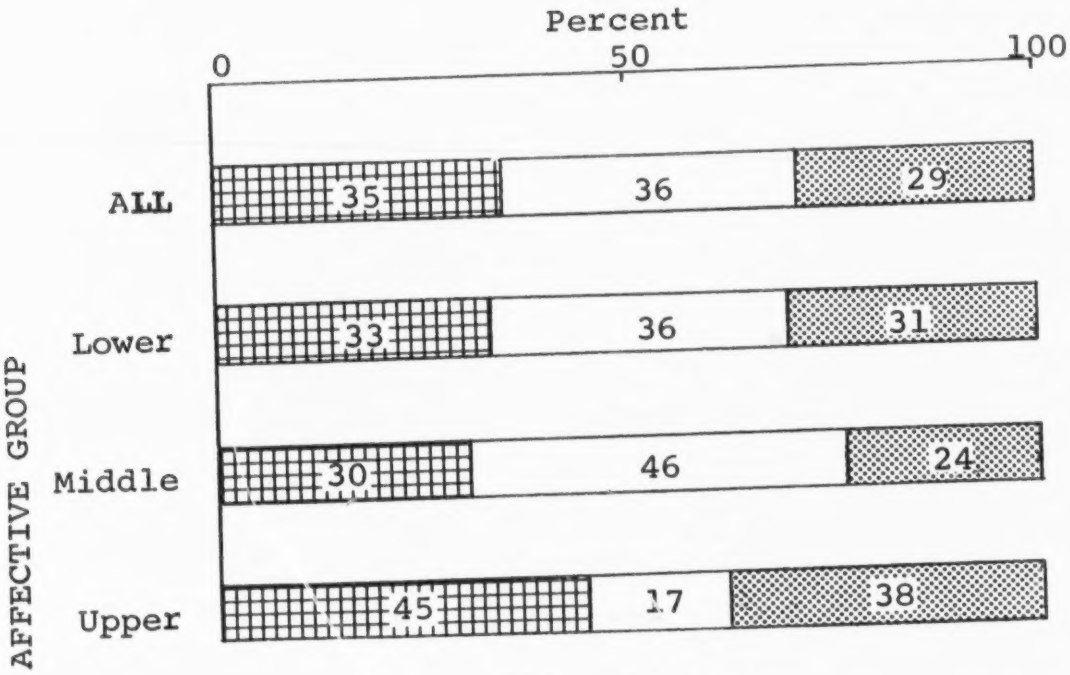
BLACK CHILDREN

CHART X

MEMBERSHIP IN
IMPROVEMENT GROUPS
BY AFFECTIVE GROUPS

READING IMPROVEMENT vs
ATTITUDE TOWARD SCHOOL
(OMNIBUS II)

ATTENDED TO CHILDREN



ALL CHILDREN

N - % Membership

* See Appendix
For Definition

NO SIGNIFICANT RELATIONSHIP

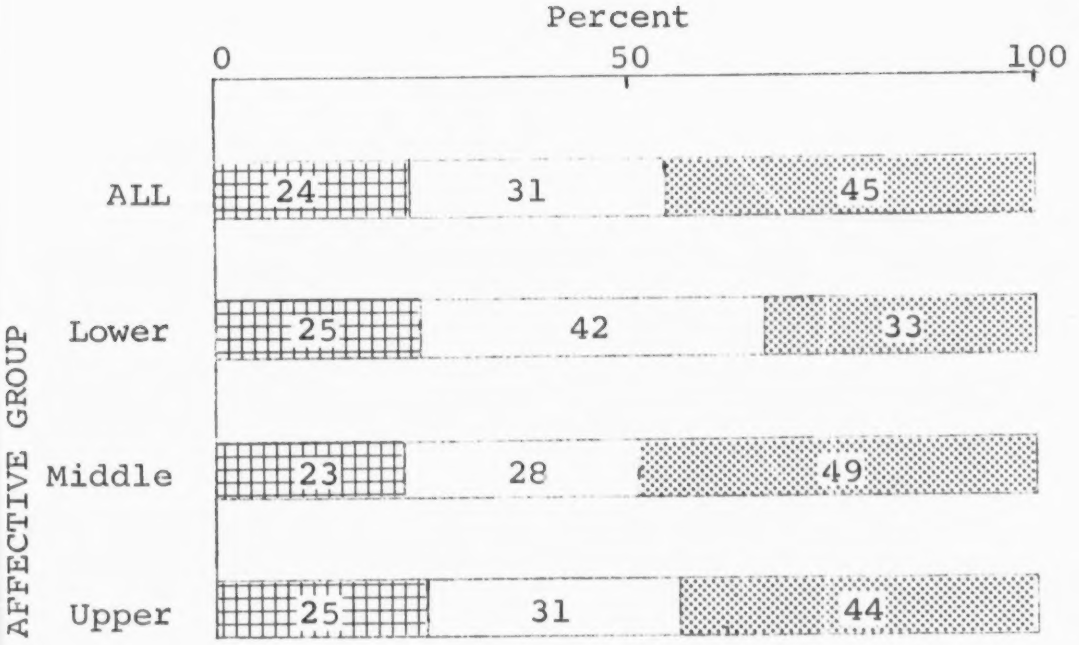
BLACK CHILDREN

CHART XI

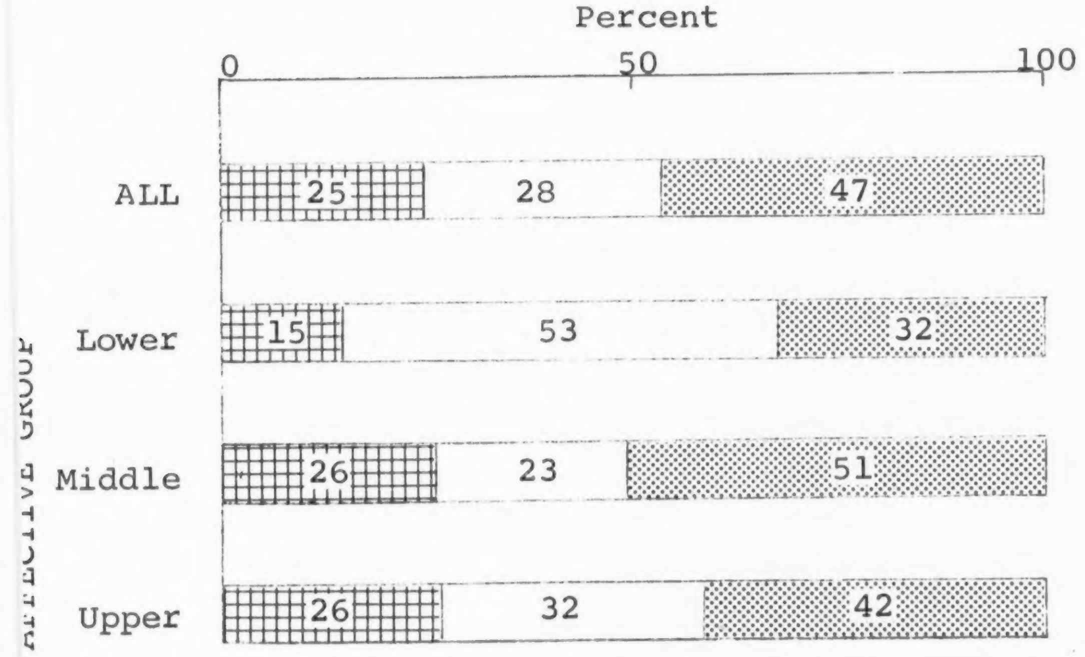
MEMBERSHIP IN
IMPROVEMENT GROUPS
BY AFFECTIVE GROUPS

READING IMPROVEMENT vs
SELF ESTEEM
(OMNIBUS I)

NOT ATTENDED TO CHILDREN
IN EXPERIMENTAL CLASSES



ALL CHILDREN



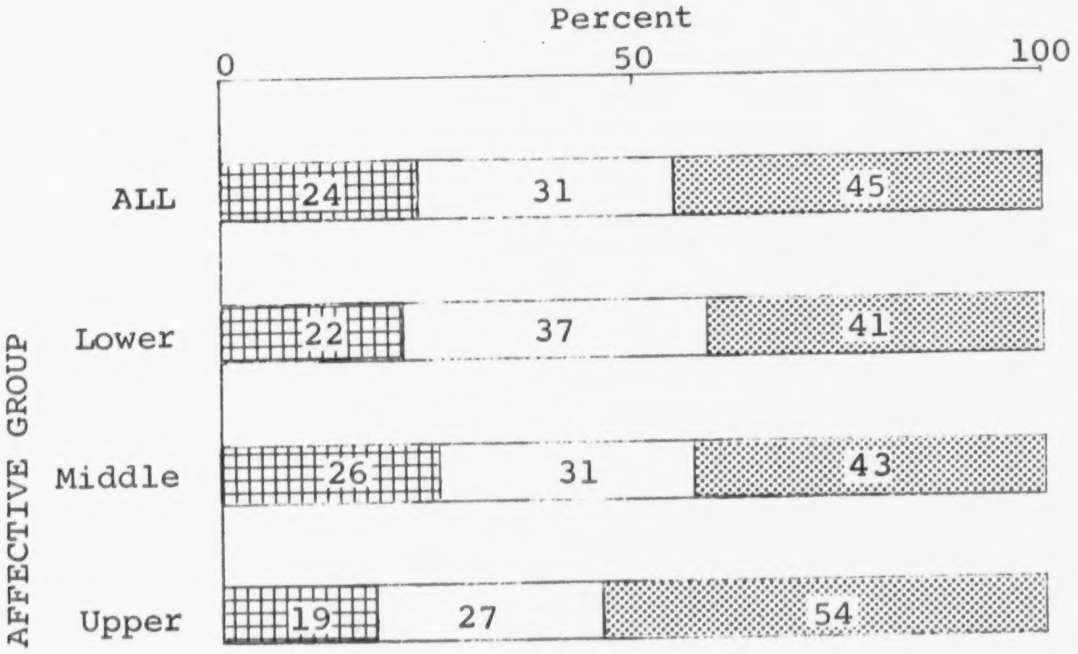
BLACK CHILDREN

CHART XII

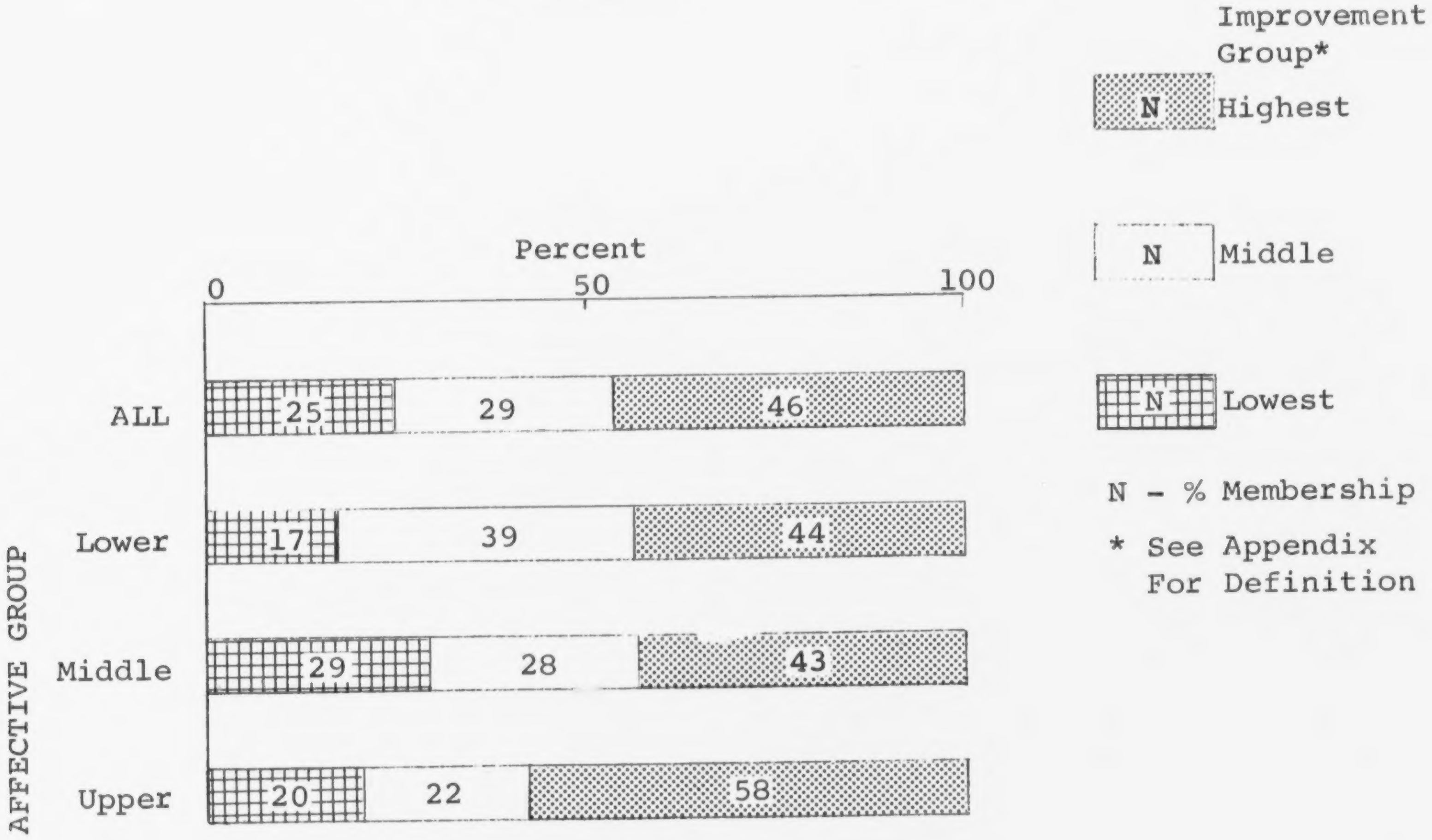
MEMBERSHIP IN IMPROVEMENT GROUPS BY AFFECTIVE GROUPS

READING IMPROVEMENT vs ATTITUDE TOWARD SCHOOL (OMNIBUS II)

NOT ATTENDED TO CHILDREN IN EXPERIMENTAL CLASSES



ALL CHILDREN



N – % Membership

* See Appendix For Definition

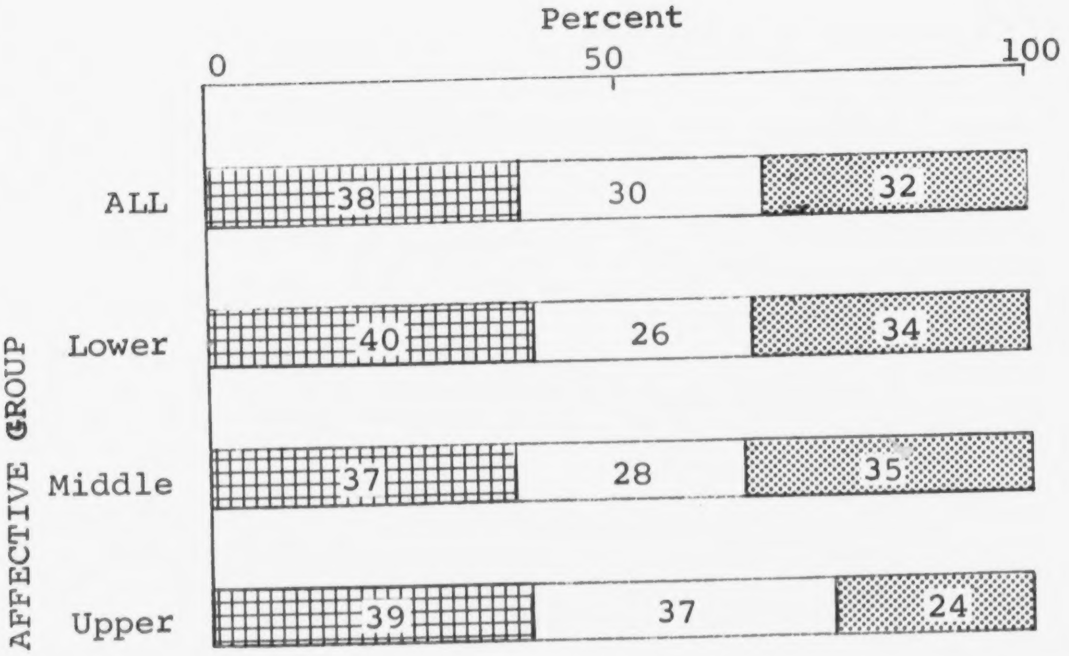
BLACK CHILDREN

CHART XIII

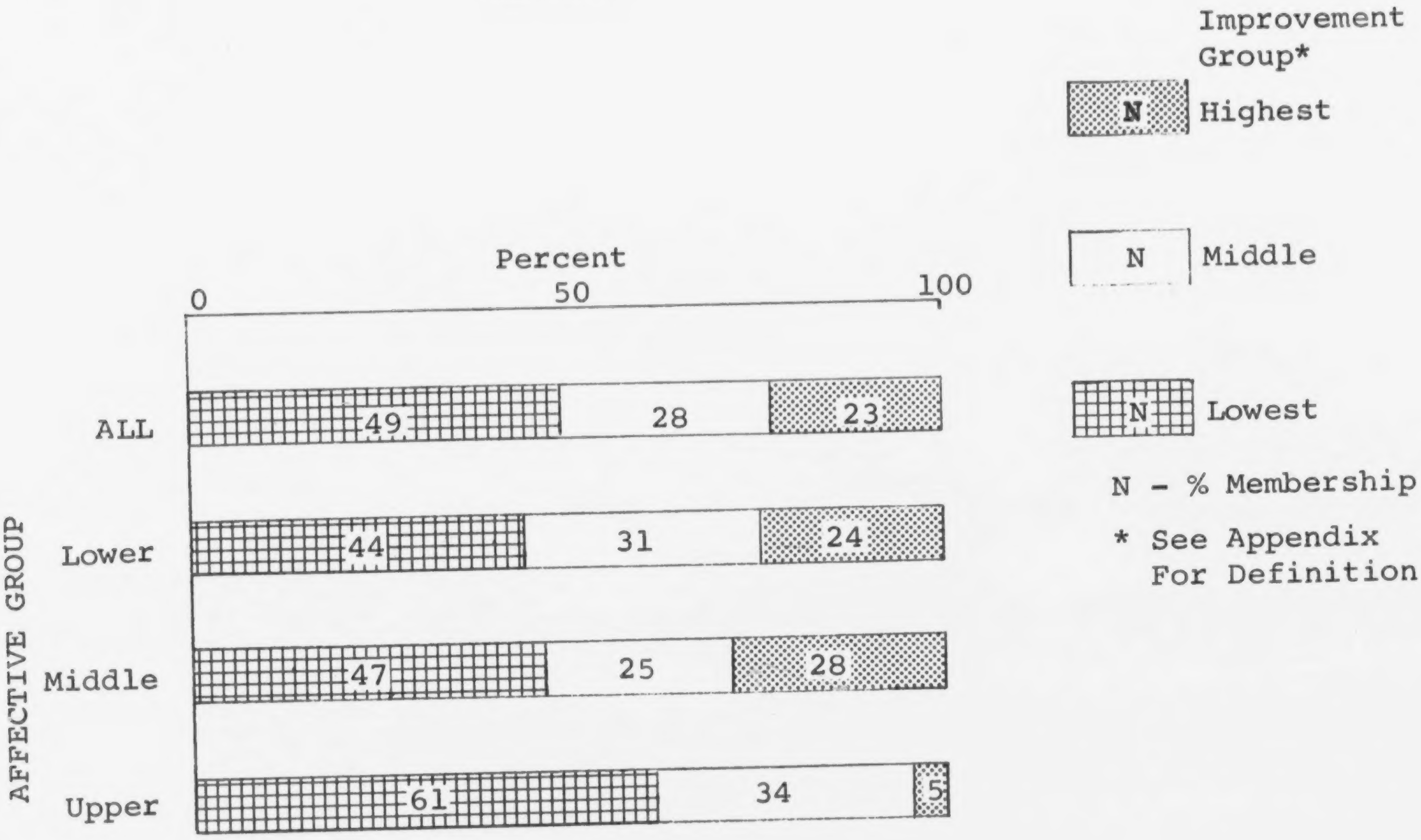
MEMBERSHIP IN
IMPROVEMENT GROUPS
BY AFFECTIVE GROUPS

MATH IMPROVEMENT vs
ATTITUDE TOWARD SCHOOL
(OMNIBUS II)

NOT ATTENDED TO CHILDREN
IN EXPERIMENTAL CLASSES



READING



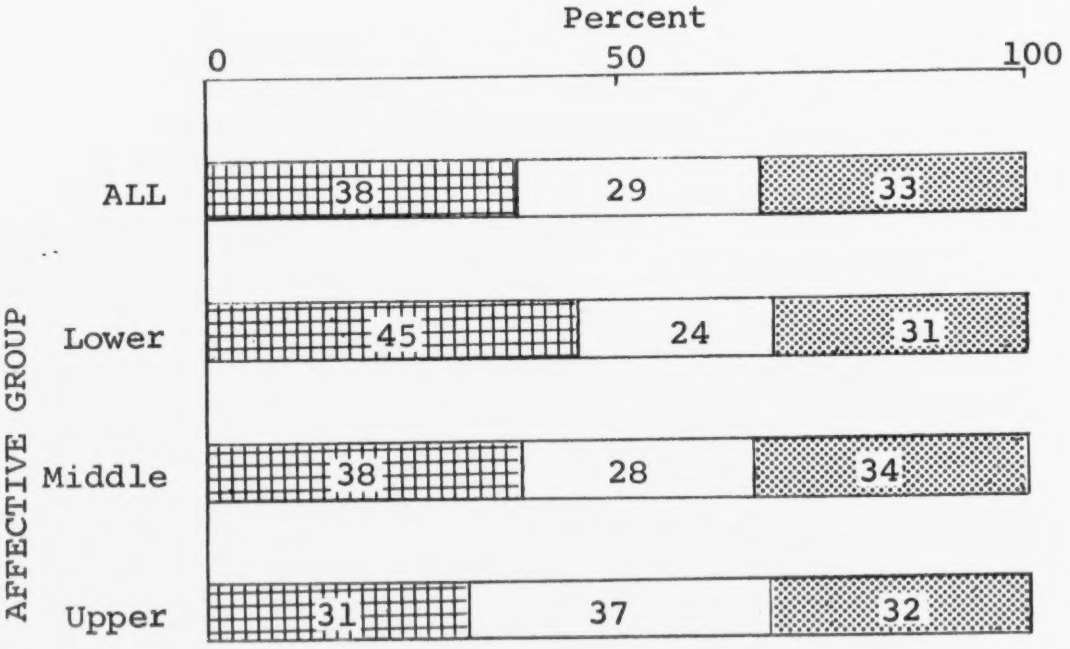
BLACK CHILDREN

CHART XIV

MEMBERSHIP IN
IMPROVEMENT GROUPS
BY AFFECTIVE GROUPS

MATH IMPROVEMENT vs
ATTITUDE TOWARD LANGUAGE
ARTS (PICTURE III)

NOT ATTENDED TO CHILDREN
IN EXPERIMENTAL CLASSES



ALL CHILDREN

Improvement
Group*

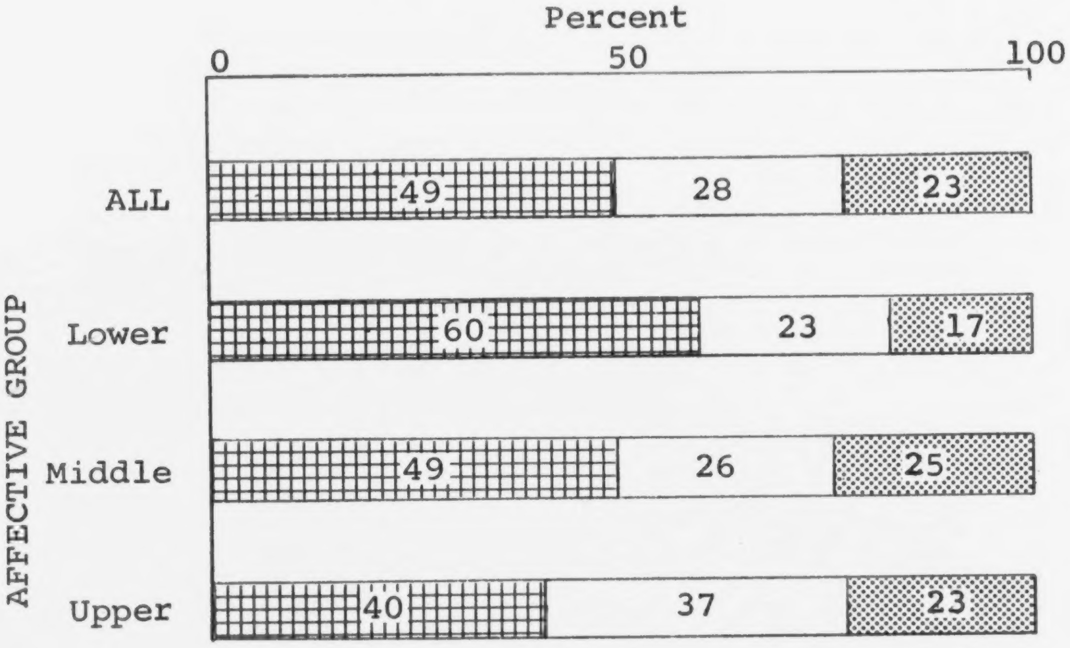
▩ N Highest

☐ N Middle

▦ N Lowest

N - % Membership

* See Appendix
For Definition



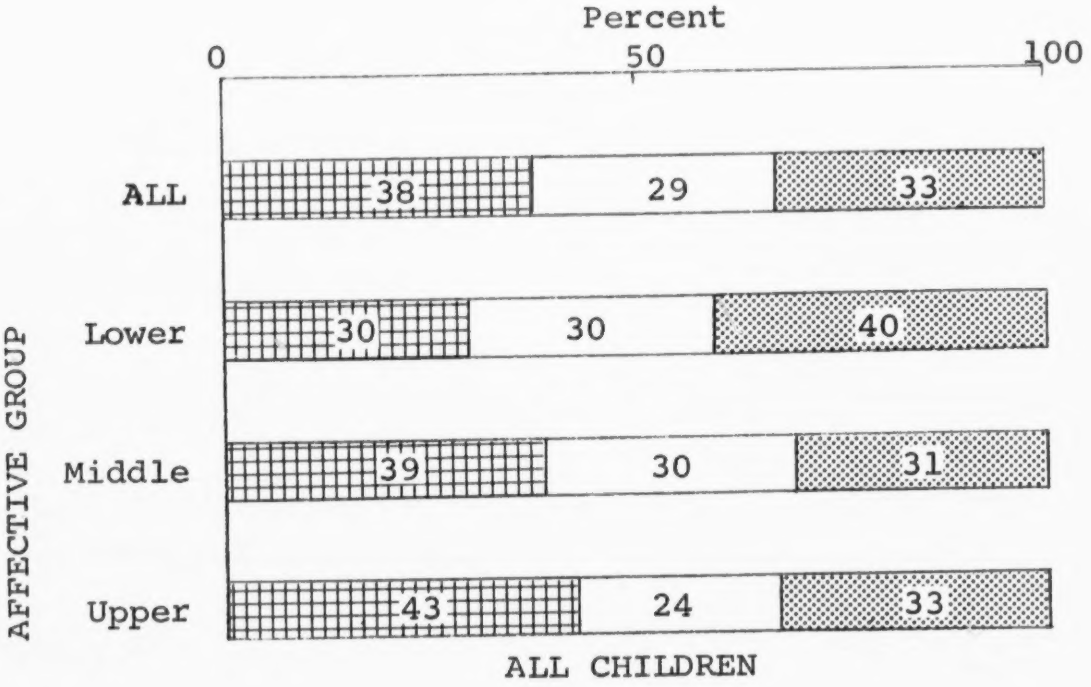
BLACK CHILDREN

CHART XV

MEMBERSHIP IN
IMPROVEMENT GROUPS
BY AFFECTIVE GROUPS

MATH IMPROVEMENT vs
ATTITUDE TOWARD SCIENCE
(PICTURE V)

NOT ATTENDED TO CHILDREN
IN EXPERIMENTAL CLASSES



Improvement
Group*

▩ N Highest

☐ N Middle

▦ N Lowest

N - % Membership

* See Appendix
For Definition

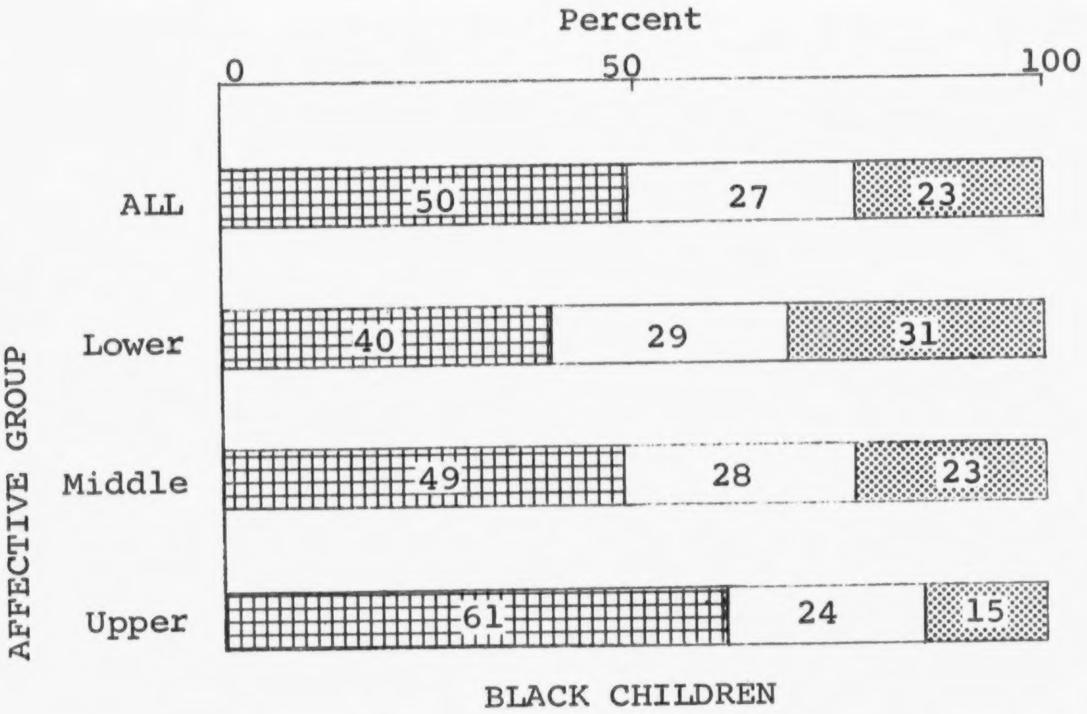
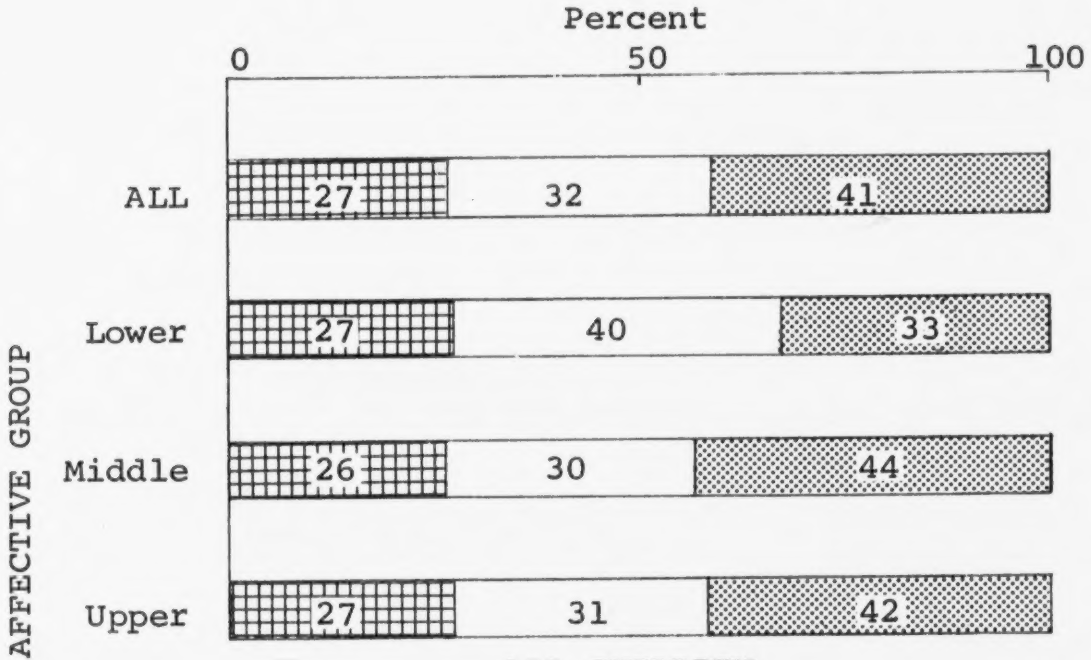


CHART XVI

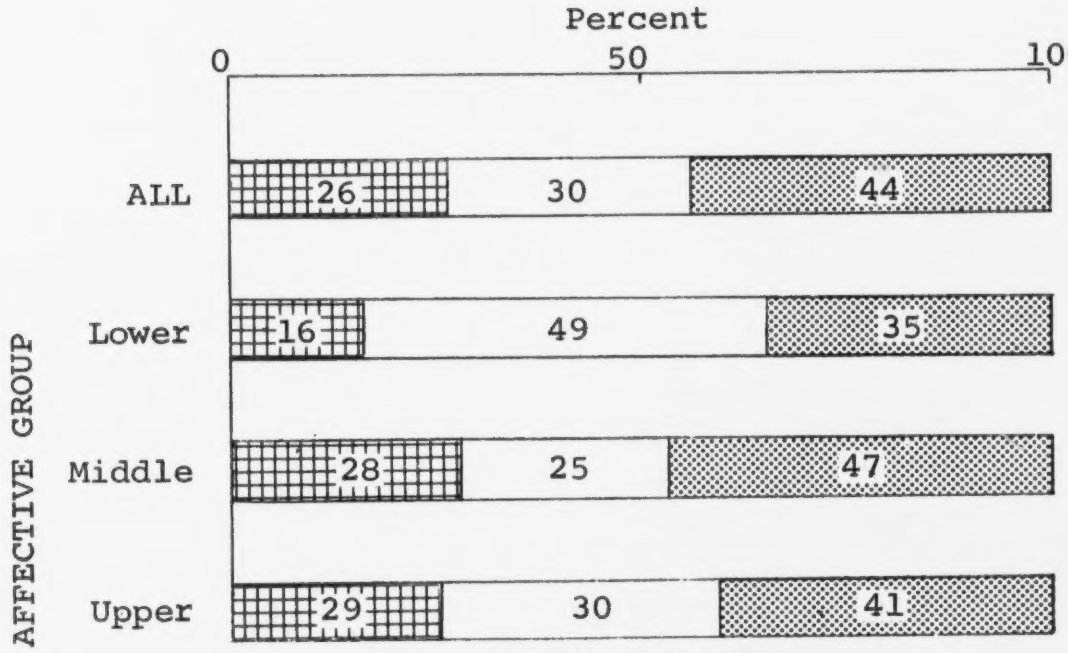
MEMBERSHIP IN
IMPROVEMENT GROUPS
BY AFFECTIVE GROUPS

READING IMPROVEMENT vs
SELF ESTEEM
(OMNIBUS I)

ALL CHILDREN IN
EXPERIMENTAL CLASSES



ALL CHILDREN



BLACK CHILDREN

Improvement
Group*

▒ N Highest

☐ N Middle

▦ N Lowest

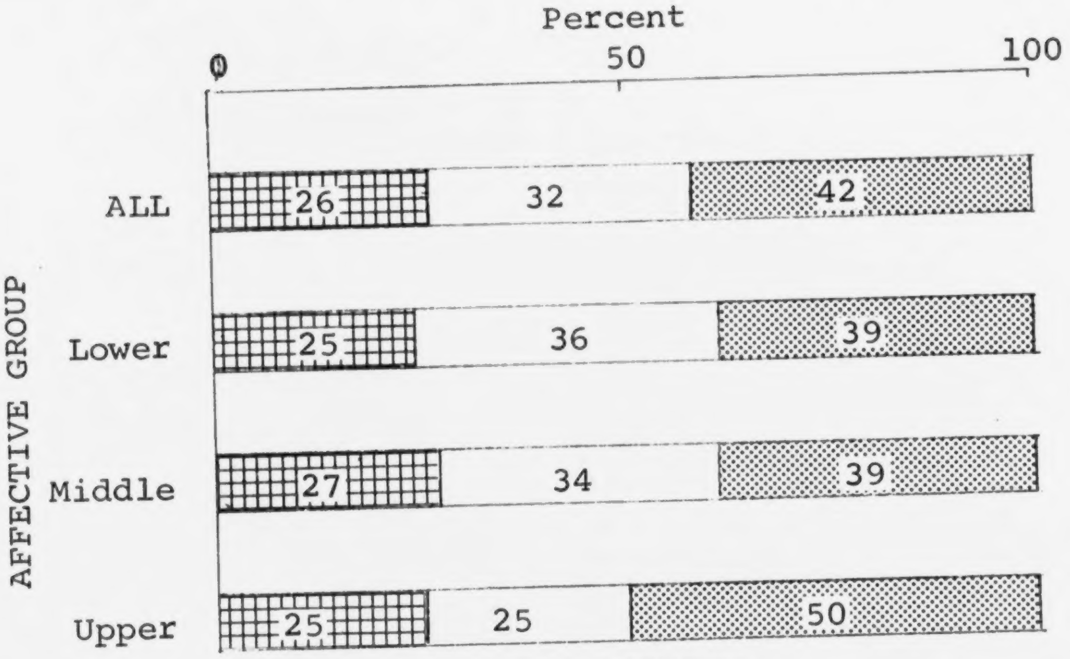
N – % Membership

* See Appendix
For Definition

CHART XVII

MEMBERSHIP IN
IMPROVEMENT GROUPS
BY AFFECTIVE GROUPS

READING IMPROVEMENT vs
ATTITUDE TOWARD SCHOOL
(OMNIBUS II)
ALL CHILDREN IN
EXPERIMENTAL CLASSES



ALL CHILDREN

Improvement
Group*

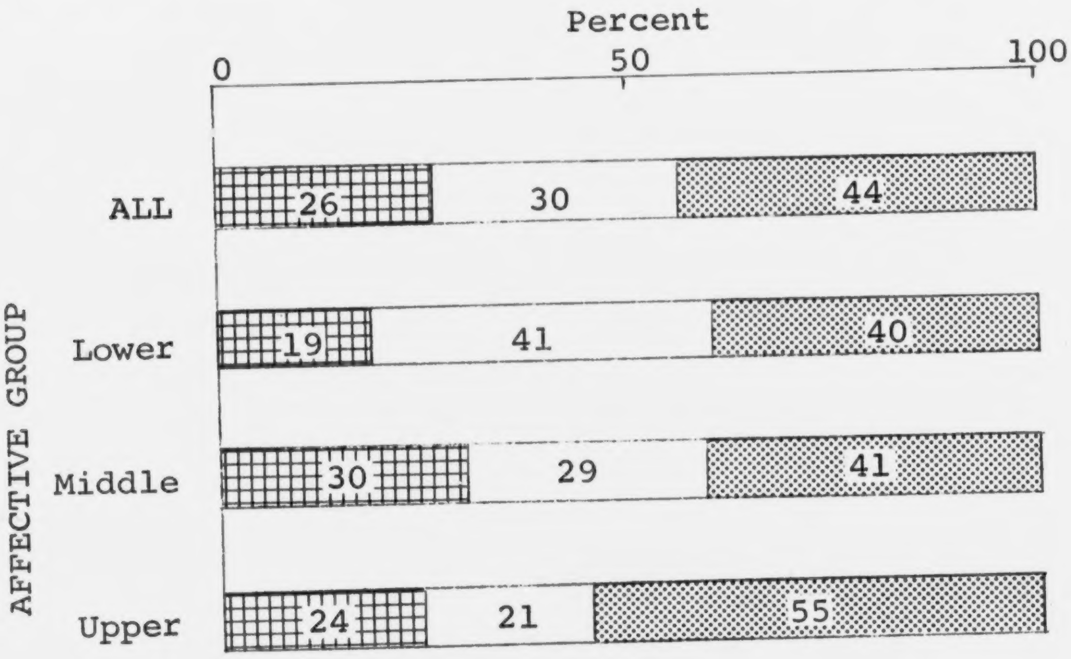
▒ N Highest

☐ N Middle

▦ N Lowest

N – % Membership

* See Appendix
For Definition



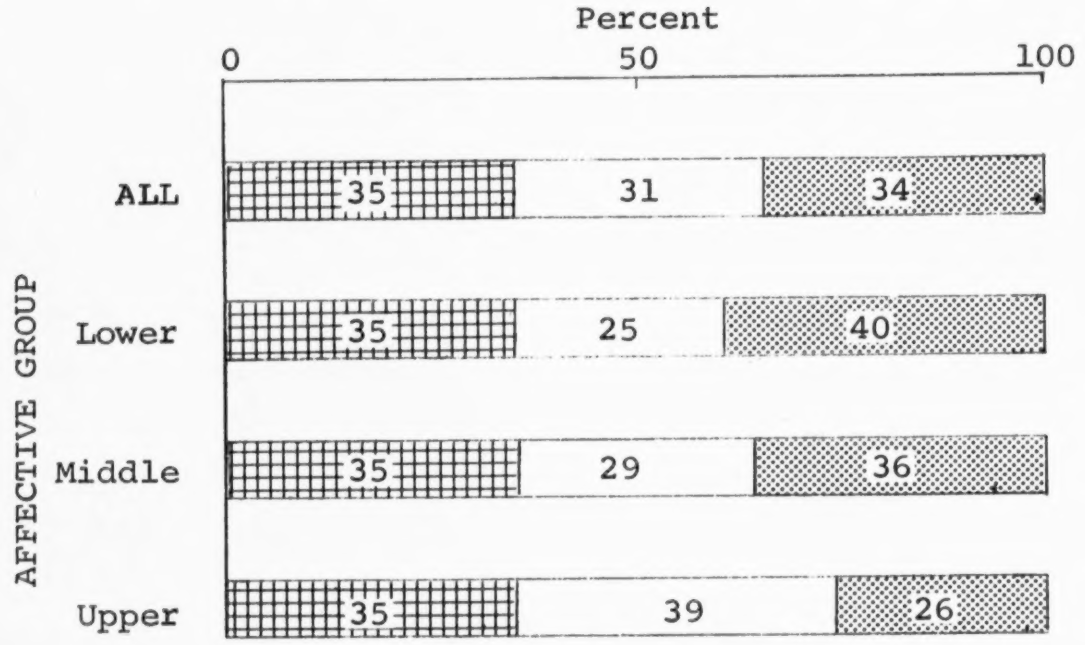
BLACK CHILDREN

CHART XVIII

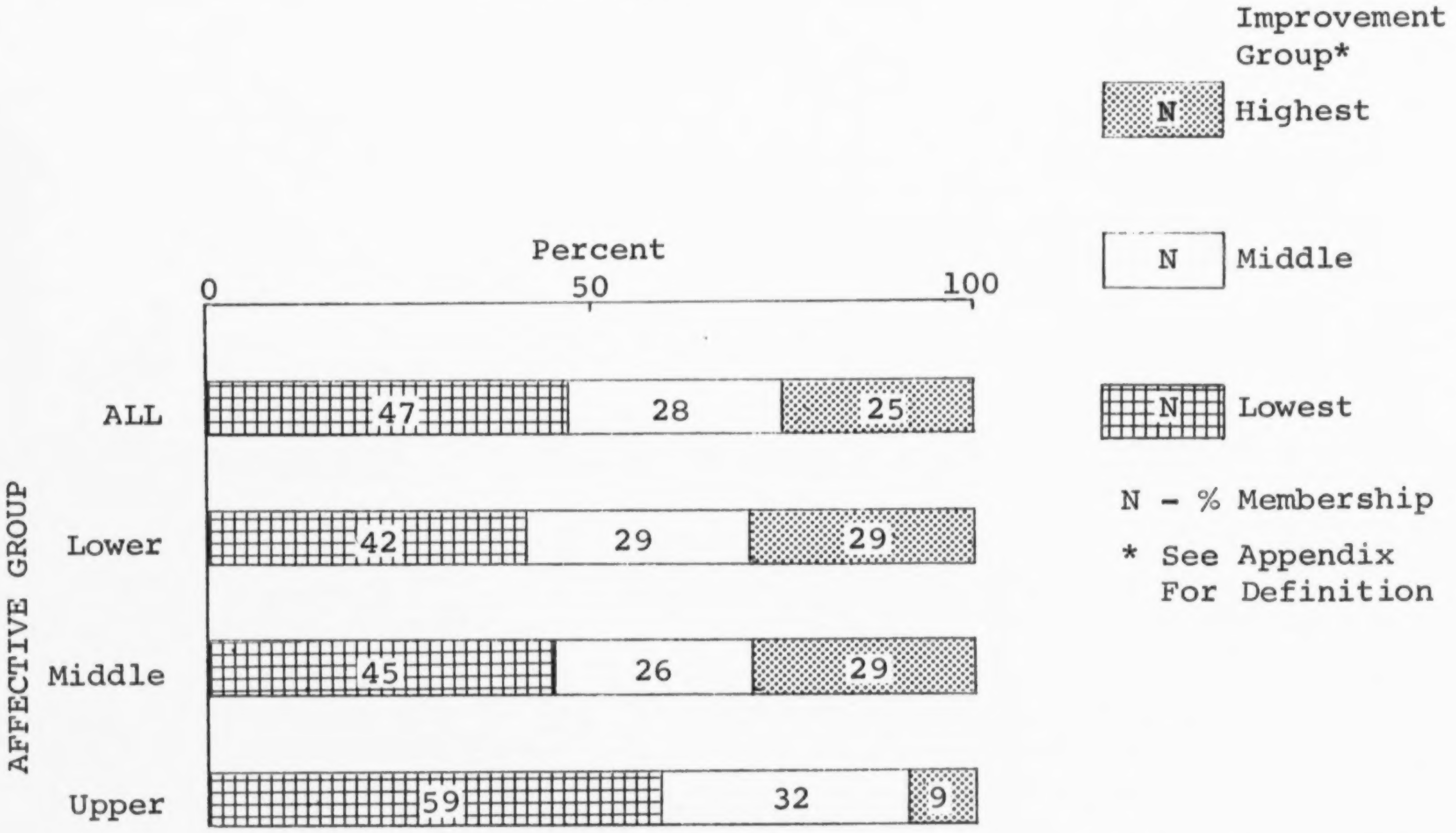
MEMBERSHIP IN IMPROVEMENT GROUPS BY AFFECTIVE GROUPS

MATH IMPROVEMENT vs ATTITUDE TOWARD SCHOOL (OMNIBUS II)

ALL CHILDREN IN EXPERIMENTAL CLASSES



ALL CHILDREN



BLACK CHILDREN

APPENDIX G
Data Collection Instruments
Non-classroom Paraprofessionals

PARAPROFESSIONAL INFORMATION FORM

________	________	________	________
NAME	PARAPROFESSIONAL TITLE	DISTRICT	SCHOOL

1. Who is your immediate supervisor?
(The person who directs and guides your daily work; the person who is most responsible for your daily activities?)

Name________________________________

Position______________________________ (example: Assistant Principal, Principal, Librarian, Guidance Counselor, Teacher, etc.)

If this person does not work in your school, please specify where he can be located.

____

____

2. Did you this year or are you now participating in any training classes that take place in your school?

Yes____ No___

If yes, please specify the following:

a) How often does your training take place?

More than once a week	___	Once a month	___
Once a week	___	Less than once a month	___
Twice a month	___	Other (please specify)	___

b) Name of trainer ________________________________

Position (Title)________________________________

c) If this person does not work in your school, please specify where he can be located.

3. Did you this year or are you now participating in any training classes that take place outside of your school? (For example, with paraprofessionals from other schools who may or may not be performing the same job duties).

Yes _____ No _____

If yes, please specify the following:

a) How often does this type of training take place?

More than once a week _____
Once a week _____
Twice a month _____
Once a month _____
Less than once a month _____
Other (please specify) __________

b) Where does this type of training take place?

Another school _____
District office _____
Community agency _____
Other _____

c) Who is your out-of-school trainer?

Name ______________________________

Position (Title) ______________________________

Location where trainer can be reached: ______________________________

____

If you have more than one out-of-school trainer, please include their names and titles:

Name ____________________
Title ____________________
Location where trainer can be reached:
____
____

Name ____________________
Title ____________________
Location where trainer can be reached:
____
____

PROJECT DIRECTOR INFORMATION SHEET

Project Title: ______________________ District: ______________________

Person Completing This Form: ______________________ Telephone Number: ______________________

Title: ______________________ Function Number: ______________________

Paraprofessional Information

Please fill in with appropriate code.

Name of Paraprofessional Employed in Project	A. Title	B. School P.S. #	C. Kind	D. Grade Level	E. Work Location	F. Number of Working Hours Per Week	G. Training Areas
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							

Codes for Paraprofessional Information

A. Title of Paraprofessional

Auxiliary Trainer	0030
Educational Assistant	0020
Educational Associate	0025
Family Assistant	0050
Family Worker	0060
Parent Program Assistant	0010
School Aide	0103
Student Aide	0040
Teacher Aide	0070
Other (please specify)	

C. Kind of School

11. High School
12. Vocational High School
13. Junior High and Intermediate
14. Elementary
15. Other (please specify)

D. Grade Level

16. Pre-Kindergarten
17. Kindergarten
18. First Grade
19. Second Grade
20. Third Grade
21. Fourth Grade
22. Fifth Grade
23. Sixth Grade
24. Junior High
25. Senior High
26. Not working with students

E. Paraprofessional Spends Time in:

School

27. Classroom
28. Family or Community Room
29. Office
30. Library

Community

31. Home
32. Community Center
33. Community Agency
34. Other (please specify)

Codes for Paraprofessional Information (continued)

F. Number of Working Hours

35. 10 hours or less
36. 11-20 hours
37. 21-30 hours
38. 31-40 hours
39. More than 40 hours

G. Areas in which Paraprofessional Is Trained

40. Child Development
41. Language Arts
42. Guidance and Discipline
43. Multi-Media Approaches to Learning
44. Mathematics
45. Science
46. Music
47. Art
48. Social Studies
49. Health and Safety
50. Evaluation
51. Classroom Procedures and Routines
52. Effects of Poverty
53. School-Community Relations
54. Career Guidance
55. Community Resources
56. Legal Services
57. Medical Services
58. Interviewing Techniques
59. Library Skills
60. Other (please specify)

INSTITUTE FOR EDUCATIONAL DEVELOPMENT
52 Vanderbilt Avenue
New York, New York 10017

BACKGROUND INFORMATION AND JOB DESCRIPTIONS FOR PARAPROFESSIONALS IN THE NEW YORK CITY SCHOOLS

Directions for Answering the Questionnaire

1. Part 1 of this questionnaire is gathering background information on paraprofessionals. The answers you give can help the study determine whether or not paraprofessionals with certain backgrounds and experiences are being used in the best possible way.

   Part 2 has been divided into two sections. Section A deals with general questions about your job: your training, where you work, with whom you work, etc. Section B is designed to find out exactly what you do on your job.

2. Read each question carefully. There are no right or wrong answers. Just check the response which best answers the question for you.

   Sample Question: What sex are you?

   Male ☑

   Female ☐

   If you are a male, you would check the first box as we have shown here. Of course, if you are a female, you would check the second box rather than the first.

NOTE: This questionnaire is a revised and expanded version of two questionnaires (see Appendix C, pp. A-37 and A-45) developed during the *In-Depth Study* *of 1969-70. It has been specifically adapted to reflect the characteristics of the non-classroom paraprofessionals.*

The number and percent of respondents answering each question have been added to this copy of the original questionnaire administered to non-classroom paraprofessionals. For some items, data were collected but could not be presented in the original format. The location of these data is cited.

PART 1

BACKGROUND INFORMATION ON PARAPROFESSIONALS IN THE NEW YORK CITY SCHOOLS

1. What is your age? *(N = 146)*

Under 20	*2* *1.4*	30-34	*32* *21.9*	45-49	*15* *10.3*
20-24	*3* *2.1*	35-39	*36* *24.7*	50-59	*14* *9.6*
25-29	*13* *8.9*	40-44	*26* *17.8*	60 years or more	*1* *0.7*
				No Resp.	*4* *2.7*

2. What sex are you? *(N = 146)*

Male	*2* *1.4*	Female	*140* *95.9*
		No Resp.	*4* *2.7*

3. What is your marital status? *(N = 146)*

Single	*7* *4.8*	Widowed	*8* *5.5*
Married	*104* *71.2*	Divorced	*8* *5.5*
Separated	*17* *11.6*	*No Resp.*	*2* *1.4*

4. Where is your place of birth? *(N = 146)*

51	*34.9*	New York City
4	*2.7*	Within 100 miles of New York City (a nearby suburb)
37	*59.6*	More than 100 miles from New York City limits
4	*2.8*	*No Resp.*

If more than 100 miles from New York City, please check where: *(N = 146)*

2	*1.4*	Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, or Vermont
3	*2.1*	Delaware, District of Columbia, Maryland, New Jersey, New York, or Pennsylvania
2	*1.4*	Illinois, Indiana, Michigan, Minnesota, Ohio, or Wisconsin
48	*32.9*	Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, or West Virginia
3	*2.1*	Some other state not listed above
23	*15.8*	Territories of the United States such as Puerto Rico or the Virgin Islands
7	*4.8*	Other country (Please specify)
58	*39.7*	*No Resp.*

5. Where did you spend most of your years up to age 16? *(N = 146)*

On a farm	5	3.4	In the suburbs of a major city	11	7.5
In a small country town	32	21.9	In a major city	64	43.8
In a large town	15	10.3	In an urban ghetto	11	7.5
			No Resp.	8	5.5

6. How many years have you lived in New York City? *(N = 146)*

Less than 1 year	--	--	7-8 years	4	2.7
1-2 years	--	--	9-10 years	9	6.2
3-4 years	1	0.7	11-15 years	14	9.6
5-6 years	3	2.1	More than 15 years	111	76.0
			No Resp.	4	2.7

7. In which of these categories do you consider yourself? *(N = 146)*

American Indian	1	0.7	Spanish surname (but not Puerto Rican)	2	1.4
Black	79	54.1	White	20	13.7
Oriental	1	0.7	Other (Please specify)	6	4.1
Puerto Rican	32	21.9	*No Resp.*	5	3.4

8. Are you the head of your household? *(N = 146)*

Yes	47	32.2	No	94	64.4
			No Resp.	5	3.4

9. How many children do you have? *(N = 146)*

None	7	4.8	4	20	13.7
1	22	15.1	5	13	8.9
2	41	28.1	6 or more	7	4.8
3	34	23.3	*No Resp.*	2	1.4

10. Do you have children of your own, children of relatives, or foster children living with you now? *(N = 146)*

Yes	115	78.8	No	24	16.4	*No Resp.*	7	4.8

IF YOUR ANSWER TO QUESTION 10 WAS "YES," PLEASE ANSWER QUESTIONS 11, 12, 13, and 14

11. How many such children 4 years of age and younger do you have living with you now? *(N = 115)*

None	*96*	*83.4*	3	--	--	6 or more	*1*	*0.9*
1	*15*	*13.0*	4	--	--			
2	*3*	*2.6*	5	--	--			

12. How many such children from 5 through 12 years of age do you have living with you now? *(N =115)*

None	*24*	*20.8*	3	*9*	*7.8*	6 or more	*3*	*2.6*
1	*41*	*35.6*	4	*9*	*7.8*			
2	*27*	*23.4*	5	*2*	*1.7*			

13. How many such children from 13 through 18 years of age do you have living with you now? *(N = 115)*

None	*47*	*40.8*	3	*8*	*6.9*	6 or more	--	--
1	*33*	*28.6*	4	*6*	*5.2*			
2	*20*	*17.3*	5	*1*	*0.9*			

14. How many young people 19 years of age or older do you have living with you now? *(N = 115)*

None	*80*	*69.5*	3	*2*	*1.7*	6 or more	*1*	*0.9*
1	*25*	*21.7*	4	*1*	*0.9*			
2	*5*	*4.3*	5	*1*	*0.9*			

15. How many people are living in your household? (Include adults and children)

Total *DATA NOT IN THIS FORM* *Table I, p. A-204*

16. How much do you expect your total family income to be in 1971? (This sum should include the income contributed by all household members.) *(N = 146)*

Less than $3,000	*12*	*8.2*	$ 7,000- 8,999	*30*	*20.5*	$15,000 or more	*3*	*2.1*
$3,000-4,999	*25*	*17.1*	$ 9,000-11,999	*27*	*18.5*			
$5,000-6,999	*21*	*14.4*	$12,000-14,999	*12*	*8.2*	*No Resp.*	*16*	*11.0*

17. How many people in your household are dependent on your total family income? (As answered in question 16) *(N = 146)*

1	*12*	*8.2*	4	*37*	*25.3*	7	*5*	*3.4*
2	*19*	*13.0*	5	*24*	*16.4*	8 or more	*4*	*2.7*
3	*25*	*17.1*	6	*11*	*7.5*	*No Resp.*	*9*	*6.2*

18. What portion of your total family income in 1971 do you expect from the following sources?
(N = 146)

PLEASE CHECK

	None	Some	Most	*No Resp.*
Your wages as a paraprofessional	7 4.8	75 51.4	48 32.9	16 11.0
Your wages in any other job	70 47.9	3 2.1	4 2.7	69 47.3
All other household members' wages	39 26.7	13 8.9	41 28.1	53 36.3
Unemployment compensation	73 50.0	2 1.4	2 1.4	69 47.3
Public Assistance	72 49.3	11 7.5	2 1.4	61 41.8
Any disability payments	74 50.7	2 1.4	2 1.4	68 46.6
Social Security Benefits	73 50.0	6 4.1	4 2.7	63 43.2
Other sources	73 50.0	8 5.5	2 1.4	63 43.2

19. Do you have a high school diploma or its equivalent? *(N = 146)*

Yes		No		*No Resp.*	
	114 78.1		29 19.9		3 2.1

20. Which of the following categories best describes the highest level of education you have completed? *(N = 146)*

Elementary School		High School		College	
Some grades	-- --	9th grade	4 2.7	1 year	14 9.6
8th grade	9 6.2	10th grade	6 4.1	2 years	14 9.6
		11th grade	15 10.3	3 years	3 2.1
		12th grade	74 50.7	4 years	1 0.7
				5 years or more	3 2.1
				No Resp.	3 2.1

21. List the different jobs or occupations you had before becoming a paraprofessional (or school aide). Please begin with your most recent job. Also, put down the number of years you worked in each of these jobs.

	JOB	NUMBER OF YEARS
Example:	Salesclerk	2

DATA NOT IN THIS FORM:

See Table II,p. A-205

22. At present, do you have another job in addition to your work as a paraprofessional? *(N = 146)*

Yes	*3* *2.1*	No	*135* *92.5*	*No Resp.*	*8* *5.5*

If you do, what is the job? ______________________________

23. Before you became a paraprofessional, did you ever participate in a professional or vocational training program? For example, training in high school, on the job, in nursing, in a trade, in a technical institute, or in an Armed Forces school? *(N = 146)*

Yes	*60* *41.0*	No	*86* *58.9*

If you have, what was the main area of such training? *(N = 60)*

Business	*7* *11.6*	Other Health Fields	-- --	Community and Civic Activities	*7* *11.6*
Office Work	*17* *28.3*	Trades and Crafts	*6* *10.0*	Other (Describe)	*5* *8.3*
Nursing	*11* *18.3*	Agriculture or Home Economics	*1* *1.6*	*No Resp.*	*13* *21.6*

24. Please list by name the organizations, clubs, associations, community and civic organizations, and other groups to which you belong or volunteer your service. (For example, NAACP, Bowling League, Neighborhood Community Center, Local School Board, School Parents Association, CAP.)

DATA NOT IN THIS FORM:

See Tables III and IV, p. A-206

PART 2

JOB DESCRIPTIONS FOR PARAPROFESSIONALS IN THE NEW YORK CITY SCHOOLS

Section A

YOUR PREVIOUS AND CURRENT JOBS

1. How many years have you worked as a PARAPROFESSIONAL (not a school aide) in the New York City school system? (Include this year)*(N = 146)*

This Is My First Year	*25* *17.1*	This Is My Fourth Year	*21* *14.4*
This Is My Second Year	*37* *25.3*	This Is My Fifth Year	*9* *6.2*
This Is My Third Year	*41* *28.1*	*No Resp.*	*13* *8.9*

2a. What is the exact title of your present position as a paraprofessional? *(N = 146)*

Auxiliary Trainer	*11* *7.5*	Parent Program Assistant	*22* *15.1*
Educational Assistant	*30* *20.5*	School Aide	*21* *14.4*
Educational Associate	-- --	Student Aide	-- --
Family Assistant	*43* *29.5*	Teacher Aide	*4* *2.7*
Family Worker	*15* *10.3*	Other (Describe)	-- --
		No Resp.	-- --

b. Are you also known by any of the titles listed below? If so, please check the correct title? *(N = 146)*

Library Aide	*29* *19.9*	Home Liaison	*11* *7.5*
Guidance Aide	*13* *8.9*	Other (Describe)	*5* *3.4*
Receptionist Aide	*9* *6.2*	*No Resp.*	*79* *54.1*

3. In the spaces below please list the paraprofessional job title or titles you have had, beginning with your present title. Please list only the titles given in question 2a above. DO NOT LIST YOUR YEARS AS A "SCHOOL AIDE".

YEARS		DID YOU RECEIVE ANY TRAINING IN THIS JOB?
1970-1971	______________________________ (Present title)	Yes ☐ No ☐
1969-1970	______________________________	Yes ☐ No ☐
1968-1969	______________________________	Yes ☐ No ☐

DATA NOT IN THIS FORM: See Table V, p. A-207

4a. Were you ever a SCHOOL AIDE (not a paraprofessional) in the New York City school system? *(N = 146)*

Yes	53 36.3	No	85 58.2	*No Resp.*	8 5.5

b. If "Yes" how many years were you a school aide? *(N = 53)*

One Year	26 49.0	Four Years	2 3.7
Two Years	7 13.2	Five Years	4 7.5
Three Years	7 13.2	Six Years or More	7 13.2

5. What kind of school do you work in this year? *(N = 146)*

Elementary	116 79.5
Intermediate	6 4.1
Junior High	14 9.6
District Office	6 4.1
Other ________	2 1.4
No Resp.	2 1.4

6. Do you live in the school district in which you are working as a paraprofessional? *(N = 146)*

Yes	122 83.6	No	19 13.0	*No Resp.*	5 3.5

7. About how many hours do you work as a paraprofessional in a typical week? *(N = 146)*

10 hours or less	6 4.1	21-25 hours	43 29.5	36-40 hours	6 4.1
11-15 hours	2 1.4	26-30 hours	45 30.8	More than 40 hours	2 1.4
16-20 hours	29 19.9	31-35 hours	9 6.2	*No Resp.*	4 2.7

8. Of ALL the time you spend on your present paraprofessional job, what portion of all your time is spent: *(N = 146)*

	None of My Time	Some of My Time	All of My Time	*No Resp.*
A. During School Hours	2 1.4	27 18.5	106 72.6	11 7.5
B. After School Hours (including weekends)	21 14.4	44 30.1	3 2.1	78 53.4

9a. In your present paraprofessional job, where do you do MOST of your work? (Check only one.) *(N = 146)*

In a School	121 82.9	Outside of a School	17 11.6
		No Resp.	8 5.5

b. How much of your time is spent in the:

		None of My Time	Some of My Time	All of My Time	*No Resp.*
A.	Classroom	49 33.6	42 28.8	4 2.7	51 34.9
B.	School Office	33 22.6	55 37.7	11 7.5	47 32.2
C.	Playground	61 41.8	19 13.0	3 2.1	63 43.2
D.	Community or Family Room	48 32.9	31 21.2	5 3.4	52 42.5
E.	Library	58 39.7	10 6.8	25 17.1	53 36.3
F.	Guidance Office	42 28.8	39 26.7	7 4.8	58 39.7
G.	Homes of Students	42 28.8	41 28.1	4 2.7	59 40.4
H.	Community Agencies	48 32.9	29 19.9	1 0.7	68 46.6
I.	District Office	47 32.2	37 25.3	2 1.4	60 41.1
J.	Other (Please specify) _____ ______________________	35 24.0	17 11.6	4 2.7	90 61.6

10. Think of the students or parents with whom you come in contact in your role as a paraprofessional. *(N = 146)*

a. Which group do you work with most often? (Check only one.)

Black	69 47.3	White	4 2.7	*All Groups*	17 11.6
Oriental	-- --	Other (Describe)	4 2.7	*No Resp.*	6 4.1
Puerto Rican	29 19.9	*Mixed Black*	17 11.6		

b. Which group do you work with second most often? (Check only one.) *(N = 146)*

Black	32 21.9	White	17 11.6
Oriental	1 0.7	Other (Describe) ________ ________________	3 2.1
Puerto Rican	51 34.9	No other group--same as above (a.)	20 13.7
All Groups	4 2.7	*No Resp.*	18 12.3

c. Which group(s) do you work with least often or not at all? (You may check more than one.) *(N = 146)*

Black	4	2.7	White	43	29.5
Oriental	60	41.1	Other (Describe)	5	3.4
Puerto Rican	5	3.4	*All Groups*	2	1.4
Mixed Black	2	1.4	*No Resp.*	25	17.1

11. If you are working with students, what grade level(s) are involved? (You may check more than one.) *(N = 146)*

I Am Not Working with Students	36	24.7	Fourth Grade	49	33.6
Pre-Kindergarten	15	10.3	Fifth Grade	44	30.1
Kindergarten	31	21.2	Sixth Grade	29	19.9
First Grade	54	37.0	Intermediate School	8	5.5
Second Grade	59	40.4	Junior High School	13	8.9
Third Grade	53	36.3	Senior High School	4	2.7

12a. Who of the following MOST OFTEN supervises (that is, who directs and inspects) your work as a paraprofessional? (Check ONLY ONE.) *(N = 146)*

Teacher	10	6.8	Guidance Counselor	16	11.0
Teacher Trainer	8	5.5	Department or Grade Chairman	--	--
Principal	39	26.7	Another Paraprofessional (Example: Auxiliary Trainer or Parent Program Assistant)	3	2.1
Assistant Principal	29	19.9			
Project Director/Coordinator (or a member of his staff)	8	5.5	Other (Please specify) _____	4	2.7
Librarian	20	13.7	*No Resp.*	9	6.2

b. About how often does this person take time to help you with your work? If you do not see this person regularly, please try to average or estimate approximately how often you see this person. *(N = 146)*

Never	8	5.5	Twice A Week	5	3.4
Once A Month	6	4.1	Three Times A Week	3	2.1
Twice A Month	11	7.5	Four Times A Week	2	1.4
Three Times A Week	1	0.7	Once A Day	27	18.5
Once A Week	7	4.8	All The Time	76	52.1

13a. Which of the following languages do you speak, read, or write? (You may check more than one.) *(N = 146)*

English	143 97.9
Spanish	50 34.2
French	7 4.8
Italian	7 4.8
German	2 1.7
Russian	-- --
Hebrew	1 0.7
Chinese	-- --
Other (Please specify)	32 21.9
No Resp.	2 1.4

b. Which of these languages do you use on your present job as a paraprofessional? (You may check more than one.) *(N = 146)*

English	142 97.2	German	-- --
Spanish	49 33.6	Russian	-- --
French	1 0.7	Hebrew	-- --
Italian	2 1.4	Chinese	-- --
		Other (Please specify)	35 23.9
		No Resp.	2 1.4

14. If you do any teaching or tutoring of students in your present paraprofessional job, what is the subject area? *(N = 146)*

I Don't Teach Students	74 50.7	Science	2 1.4
Reading	51 34.9	Languages	5 3.4
Language Arts - English	10 6.8	Art and Music	3 2.1
Math or Arithmetic	22 15.1	Vocational Subjects	-- --
History or Social Studies	4 2.7	Physical Education	-- --
		Other (Please specify)_____ ________________________	8 5.5

YOUR TRAINING

IF YOU HAVE RECEIVED OR ARE RECEIVING TRAINING FOR YOUR PRESENT PARAPROFESSIONAL JOB, PLEASE ANSWER QUESTIONS 15-26.

IF YOU HAVE NOT RECEIVED ANY TRAINING FOR YOUR PRESENT PARAPROFESSIONAL JOB, PLEASE GO TO QUESTION 27.

15. What type of training took place, and when? Please answer both A and B. *(N = 146)*

	No Training	Part-time Training	Full-time Training	*No Resp.*
A. Before the Job Began (Pre-Service Training)	*32* *21.9*	*22* *15.1*	*5* *3.4*	*87* *59.6*
B. While on the Job (In-Service Training)	*8* *5.5*	*72* *49.3*	*6* *4.1*	*60* *41.1*

16. Up to now, how much training have you received for your present job? Please answer for A, B, and C. *(N = 146)*

No Resp.		No Training	Less Than 1 Week	1-2 Weeks	3-4 Weeks	More Than 5 Weeks
95 *65.1*	A. Part-time Training Before the Job Began	*33* *22.6*	*5* *3.4*	*3* *2.1*	*6* *4.1*	*4* *2.7*
103 *70.6*	B. Full-time Training Before the Job Began	*29* *19.9*	*2* *1.4*	*2* *1.4*	*4* *2.7*	*6* *4.1*
65 *44.5*	C. Part-time Training While on the Job	*6* *4.1*	*8* *5.5*	*14* *9.6*	*14* *9.6*	*39* *26.7*

17. Where has your training usually taken place? *(N = 146)*

In the school	*23* *15.8*
Outside the school, but in the district	*55* *37.7*
Outside the district	*7* *4.8*
Other (Please specify) ________________	*6* *4.1*
No Resp.	*55* *37.7*

18. How often has your training taken place? *(N = 146)*

More than once each week	*12*	*8.2*
Once a week	*10*	*6.8*
Twice a month	*36*	*24.7*
Once a month	*27*	*18.5*
Less than once a month	*7*	*4.8*
No Resp.	*54*	*37.0*

19. When has this training usually taken place? *(N = 146)*

During school hours	*79*	*54.1*
After school hours	*14*	*9.6*
On the weekend	--	--
Other (Please specify)	--	--
No Resp.	*53*	*36.3*

20. How long did the training session usually last? *(N = 146)*

An hour or less	*12*	*8.2*
More than an hour	*52*	*35.6*
Half a day	*30*	*20.5*
A whole day	--	--
Two or more days in a row	--	--
No Resp.	*52*	*35.6*

21. Who is usually present at your training sessions? *(N = 146)*

Only paraprofessionals from your school	*5*	*3.4*
Paraprofessionals from other schools in the district	*71*	*48.6*
Paraprofessionals from other districts	*11*	*7.5*
No Resp.	*59*	*40.4*

22a. Have other school officials (e.g., principal, assistant principal, librarians, etc.) ever been present at the training sessions: *(N = 146)*

Yes	*66*	*45.2*
No	*25*	*17.1*
No Resp.	*55*	*37.7*

b. If yes, who was usually present? (You may check more than one.)
(N = 146)

Principal	*12* *8.2*		Librarian	*8* *5.5*
Assistant Principal	*6* *4.1*		Guidance Counselor	*23* *15.8*
Teacher Trainer	*21* *14.4*		Coordinator of the Project	*32* *21.9*
Auxiliary Trainer	*29* *19.9*		Other (Please specify)____	*6* *4.1*

c. If school officials were present, how often did they attend? *(N = 146)*

Rarely	*21* *14.4*	Frequently	*7* *4.8*
Occasionally	*21* *14.4*	Always	*22* *15.1*
		No Resp.	*75* *51.4*

23. Did the training give you instruction in any of the following activities?
(N = 146)

	Yes
Operating audio-visual and other school equipment	*25* *17.1*
Classroom management	*34* *23.3*
Identifying community services and whom to contact for assistance	*49* *33.6*
Giving information about housing, employment, legal aide, etc.	*31* *21.2*
Counseling parents and students	*49* *33.6*
Library skills and procedures	*23* *15.8*
Disciplining children	*48* *32.9*
Instructing children in classroom subjects (reading, arithmetic, etc.)	*39* *26.7*
Making instructional materials	*36* *24.7*
Orientation to the school	*34* *23.3*
Caring for children	*48* *32.9*
Collecting information about health services, employment opportunities, housing facilities, etc.	*34* *23.3*
Child growth and development	*43* *29.5*
Other (Please specify) ________________	*9* *6.2*

24. How often were the following instructional methods used during your training sessions? *(N = 146)*

No Resp.		Never	Rarely	Occasionally	Frequently
75 51.4	Individual conferences	28 19.2	12 8.2	17 11.6	14 9.6
58 39.7	Group discussions	7 4.8	1 0.7	18 12.3	62 42.5
70 40.8	Lectures	14 9.6	6 4.1	25 17.1	31 21.2
77 52.7	Demonstrations	24 16.4	7 4.8	19 13.0	19 13.0
69 47.3	Role playing (acting as parents, pupils, teachers, etc.)	23 15.8	14 9.6	25 17.1	15 10.3

25. How often were the following media and activities used during your training sessions? *(N = 146)*

No Resp.		Never	Rarely	Occasionally	Frequently
69 47.3	Films	30 20.5	13 8.9	22 15.1	12 8.2
79 54.1	Filmstrips	33 22.6	4 2.7	24 16.4	6 4.1
79 54.1	Recordings	39 26.7	8 5.5	14 9.6	6 4.1
81 55.5	Video tapes	42 28.8	7 4.8	13 8.9	3 2.1
76 52.1	Field trips	46 31.5	8 5.5	13 8.9	3 2.1
65 44.5	Outside speakers	15 10.3	9 6.2	39 26.7	18 12.3

26. Is your training still going on? *(N = 146)*

Yes	No	*No Resp.*
67 45.9	26 17.8	53 36.3

27. Do you participate in the Career Ladder Program offered by the Board of Education? *(N = 146)*

Yes	No	*No Resp.*
26 17.8	109 74.7	11 7.5

28. AT THE PRESENT TIME, what school or college courses are you taking? Please include those courses taken in the training program you just described, in addition to those courses you may be taking on your own.

(N = 146)

a. I Am Not Taking Any Courses 88 60.3

	I Am Taking These Courses In My Paraprofessional Training Program	I Am Taking These Courses on My Own
b. I Am Taking High School Equivalency Courses	5 3.4	11 7.5
c. I Am Taking College Courses (Please give titles)	17 11.6	15 10.3
d. I Am Taking Adult Education Courses (Please give titles)	1 0.7	7 4.8
e. I Am Taking Other Courses (Please give titles)	5 3.4	9 6.2

YOUR NEIGHBORHOOD

29. How long have you lived in your present neighborhood? *(N = 146)*

Less Than One Year	7	4.8	7-8 Years	28	19.2
1-2 Years	7	4.8	9-10 Years	11	7.5
3-4 Years	12	8.2	11-15 Years	22	15.1
5-6 Years	19	13.0	More Than 15 Years	39	26.7
			No Resp.	1	0.7

30. Of all the children or families you work with, about how many live within three blocks of your home? *(N=146)*

None	22	15.1	About Half	29	19.9
Very Few	10	6.8	More Than Half	55	37.7
Some	26	17.8	*No Resp.*	4	2.8

31. Of all the children you work with, about how many have you taken care of at home as a favor to the family and not because of your job? *(N = 146)*

None	64	43.8	About Half	3	2.1
Very Few	31	21.2	More Than Half	3	2.1
Some	40	27.4	*No Resp.*	5	3.4

32. Of all the children or families you work with, about how many do you see while out shopping or walking in the neighborhood or at the park? *(N = 146)*

None	12	8.2	About Half	29	19.9
Very Few	11	7.5	More Than Half	57	39.0
Some	33	22.6	*No Resp.*	4	2.8

33. Of all the children or families you work with, about how many go to your church, or belong to some other organization you belong to? *(N = 146)*

None	31	21.2	About Half	18	12.3
Very Few	25	17.1	More Than Half	8	5.5
Some	58	39.7	*No Resp.*	6	4.1

34. Of all the adults you work with now, about how many were in elementary or secondary school with you? *(N = 146)*

None	121	82.9	About Half	1	0.7
Very Few	13	8.9	More Than Half	2	1.4
Some	4	2.7	*No Resp.*	5	3.4

SECTION B

JOB ACTIVITIES

Directions:

To find out exactly what you do on your job, we have listed below activities we think you might have done or are doing now on your job.

1. Read each activity and check how often you do it in the columns to the right. If you do not do an activity on your job, check Never. If you do an activity on you job, check either Once In A While, Fairly Often, or Very Often. Please make one check for each activity.

EXAMPLE:

ACTIVITIES	HOW OFTEN ARE YOU LIKELY TO DO THIS OR SOMETHING LIKE THIS ON YOUR JOB? *			
	Never	Once In A While	Fairly Often	Very Often
Reading aloud to children			✓	

If "reading aloud to children" is an activity you do "fairly often" your paraprofessional job, you would have checked the column to the right labeled "fairly often" as the example shows here.

2. As you go over the different activities, you may feel that some are repeated. However, EACH ITEM IS DIFFERENT. Be sure to read them carefully.

3. We know this is a long questionnaire and apologize for its length. However, instead of asking you to write a two or three page essay describing your job, we have written a checklist to make things easier for you.

DATA NOT IN THIS FORM

See Chapter 12

* *Paraprofessionals, Project Directors, Supervisors, and Trainers answered each one of the 207 items according to the question peculiar to their position. These individual questions are listed on each of the following pages in order to remind the reader of the various respondents.*

JOB DESCRIPTIONS

PARAPROFESSIONALS ANSWERED:

ACTIVITIES	HOW OFTEN ARE YOU LIKELY TO DO THIS OR SOMETHING LIKE THIS ON YOUR JOB? Never	Once In A While	Fairly Often	Very Often
Organizing recess time into directed games and activities				
Planning a field trip or visit for paraprofessionals in your district				
Arranging a meeting between parents and the school nurse to discuss school health programs, such as an annual polio vaccination	*PROJECT DIRECTORS ANSWERED:*			
Meeting with teachers or other members of the school staff to discuss any problems they may have concerning paraprofessionals who assist them	HOW OFTEN DO YOU EXPECT THESE PARAPROFESSIONALS TO PERFORM THE FOLLOWING ACTIVITIES?			
Collecting names and addresses of those students who have either long-overdue or lost library books				
Telling paraprofessionals about available health clinics, vaccination programs, medical tests, or other health services				
Visiting parents in their homes to discuss problems their child is having in school	*IMMEDIATE SUPERVISORS ANSWERED:*			
Observing paraprofessionals working with students in the classroom	HOW OFTEN DOES THE PARAPROFESSIONAL YOU SUPERVISE PERFORM THE FOLLOWING ACTIVITIES?			
Keeping lists of people you can call about health, employment, housing, welfare, or legal problems				
Hearing complaints from parents about problems they have with the school				
Monitoring the doors and hallways of the school				
Reporting discipline problems to a principal, counselor, teacher, parent, or others	*TRAINERS ANSWERED:*			
Correcting and grading essay tests or themes	HOW OFTEN DO YOU TRAIN THESE PARAPROFESSIONALS IN THE FOLLOWING ACTIVITIES?			
Assigning written homework to students				
Giving first aid to children in accordance with school policies, such as cleaning a cut or scrape and applying a Band-Aid				
Keeping a student or group of students after school				
Showing affection and warmth to a troubled child by holding or caressing him				
Explaining school rules to students				

JOB DESCRIPTIONS

PARAPROFESSIONALS ANSWERED:

HOW OFTEN ARE YOU LIKELY TO DO THIS OR SOMETHING LIKE THIS ON YOUR JOB?

PROJECT DIRECTORS ANSWERED:

HOW OFTEN DO YOU EXPECT THESE PARAPROFESSIONALS TO PERFORM THE FOLLOWING ACTIVITIES?

IMMEDIATE SUPERVISORS ANSWERED:

HOW OFTEN DOES THE PARAPROFESSIONAL YOU SUPERVISE PERFORM THE FOLLOWING ACTIVITIES?

TRAINERS ANSWERED:

HOW OFTEN DO YOU TRAIN THESE PARAPROFESSIONALS IN THE FOLLOWING ACTIVITIES?

ACTIVITIES	Never	Once In A While	Fairly Often	Very Often
Operating a duplicating machine, such as a Mimeograph, Ditto, Xerox, or Rexograph				
Going over a paper with a child, correcting and pointing out his errors				
Giving parents advice on health precautions, such as suggesting menus for a balanced diet and ways to dress children more warmly in winter				
Making an appointment for a parent with an employment agency or center				
Letting the school people know when a family is changing its address or moving out of the district				
Registering students: recording their names, telling them who their teachers are, and where they are to report				
Greeting parents, community leaders, or others who come to the school				
Keeping a record of students' illnesses, handicaps, or medical absences from school				
Handing out and collecting materials during a paraprofessional training session				
Letting the Welfare Board know of families that need assistance				
Taking minutes at training meetings				
Setting up and arranging meetings for the paraprofessionals in your district; for example, reserving a room, announcing a meeting, and preparing materials				
Recommending library books to students according to their reading ability				
Preparing refreshments for a paraprofessional training session				
Keeping files of information on health clinics, tutoring programs, job training centers, welfare programs, police programs (such as PAL), housing projects, or other community agencies				
Getting to know what families in your school are in need of welfare or other financial assistance				

JOB DESCRIPTIONS

PARAPROFESSIONALS ANSWERED:

HOW OFTEN ARE YOU LIKELY TO DO THIS OR SOMETHING LIKE THIS ON YOUR JOB?

PROJECT DIRECTORS ANSWERED:

HOW OFTEN DO YOU EXPECT THESE PARAPROFESSIONALS TO PERFORM THE FOLLOWING ACTIVITIES?

IMMEDIATE SUPERVISORS ANSWERED:

HOW OFTEN DOES THE PARAPROFESSIONAL YOU SUPERVISE PERFORM THE FOLLOWING ACTIVITIES?

TRAINERS ANSWERED:

HOW OFTEN DO YOU TRAIN THESE PARAPROFESSIONALS IN THE FOLLOWING ACTIVITIES?

ACTIVITIES	Never	Once In A While	Fairly Often	Very Often
Taking a child to see the school nurse				
Distributing routine notices, such as announcements of Parent Association meetings, school staff meetings, and schedule changes				
Administering tests developed by the teacher, such as spelling tests, reading dictation, and math quizzes				
Assigning students to seats or work areas, such as the classroom desks, assembly seats, or lab tables				
Making sure that a student has fully recovered from an illness before returning to school				
Sending students to the principal's office or to another disciplinary staff member				
Talking quietly to a child who is upset or disturbing the class				
Listening to paraprofessionals talk about their classes, things they are learning in the classroom or in college courses, and problems they have with their teachers, school, or school work				
Helping young children learn how to use crayons, scissors, paste, and paint				
Listening to children tell a story they made up, explain what they did over the weekend, describe what they would like to be when they grow up, etc.				
Showing parents ways they can help their children do school work at home, such as questions to ask about an assignment or learning drills and games to play with children				
Meeting with a family and a principal to discuss a particular legal problem which the family may have				
Letting the school know of parents who are interested in working with school children or in other school jobs				
Helping students plan regular committee meetings or programs for special events				
Organizing a school party or fair: getting refreshments, hiring a band, and setting up exhibits or rides				

JOB DESCRIPTIONS

PARAPROFESSIONALS ANSWERED:

HOW OFTEN ARE YOU LIKELY TO DO THIS OR SOMETHING LIKE THIS ON YOUR JOB?

ACTIVITIES	Never	Once In A While	Fairly Often	Very Often
Keeping records of student performance and progress in reading, math, or other skills; for example, a file of all his tests or a list of books he has read				
Delivering and collecting equipment and supplies, such as audio-visual equipment (movie projectors, tape recorders, record players) and classroom supplies (paints,paper,books)				
Assisting with experiments or demonstrations during a training session				
Inviting parents to school meetings to discuss community issues, such as election of a local school board,rezoning, or a new playground				
Taking care of messages, reports, and records which come to the school office				
Leading discussions on various library skills, such as how to use a dictionary and a card catalogue				
Hearing complaints from paraprofessionals about problems they have with teachers or administrators; for example, questions regarding their job responsibilities				
Organizing a meeting with the parents and school staff to discuss ways to raise money for the Parents Association or other school-community programs				
Supplying names of those paraprofessionals who are intereste in the college opportunities program to the district office				
Assisting the librarian in taking inventory of library books and materials				
Keeping records of names, addresses, and telephone numbers of paraprofessionals, families, and students you work with				
Learning about special programs the school has to offer,such as tutoring, remedial reading, Black or Puerto Rican cultural classes, etc.				
Supervising pupil activities during class time				
Taking records, reports,and messages to the school office				
Correcting homework, workbook exercises, papers, etc.				
Assigning classroom jobs or responsibilities to students, such as erasing the blackboard or closing the windows				

PROJECT DIRECTORS ANSWERED:

HOW OFTEN DO YOU EXPECT THESE PARAPROFESSIONALS TO PERFORM THE FOLLOWING ACTIVITIES?

IMMEDIATE SUPERVISORS ANSWERED:

HOW OFTEN DOES THE PARAPROFESSIONAL YOU SUPERVISE PERFORM THE FOLLOWING ACTIVITIES?

TRAINERS ANSWERED:

HOW OFTEN DO YOU TRAIN THESE PARAPROFESSIONALS IN THE FOLLOWING ACTIVITIES?

JOB DESCRIPTIONS

PARAPROFESSIONALS ANSWERED:

ACTIVITIES	HOW OFTEN ARE YOU LIKELY TO DO THIS OR SOMETHING LIKE THIS ON YOUR JOB?			
	Never	Once In A While	Fairly Often	Very Often
Taking children to the washroom after play or work periods and helping them clean up				
Stopping arguments and fights among students				
Listening attentively to a troubled child, thereby letting him talk out a problem				
Making appointments and arranging meetings for principals, guidance counselors, teachers, and other school staff members				
Pronouncing and spelling new words and explaining their meaning to children				
Playing learning games with students, such as rhyming, guessing, or finger games				
Advising families on how to help their children stay out of trouble with the law, such as making sure they are at home every night or that they keep appointments with a youth worker				
Arranging a meeting between the principal and a parent interested in possible school jobs				
Talking with a teacher, counselor, or other member of the school staff about a child with a special health problem, such as poor vision or hearing				
Drawing up schedules for buses, classrooms, or special facilities, such as an auditorium or gym				
Getting together a group of people from your neighborhood to go to a movie, sports event, or a special community event				
Preparing the paraprofessional payroll for your school: collecting time sheets, handing out paychecks, and checking time cards				
Demonstrating lessons which paraprofessionals can use in their classrooms; for example, how to set up science experiments, make bulletin boards, and use maps and charts				
Suggesting to the school ways to provide parents with current information on Board of Education policies, election of local school boards, or other school matters				
Conducting workshops to demonstrate the proper use of audio-visual materials and equipment				

PROJECT DIRECTORS ANSWERED:

HOW OFTEN DO YOU EXPECT THESE PARAPROFESSIONALS TO PERFORM THE FOLLOWING ACTIVITIES?

IMMEDIATE SUPERVISORS ANSWERED:

HOW OFTEN DOES THE PARAPROFESSIONAL YOU SUPERVISE PERFORM THE FOLLOWING ACTIVITIES?

TRAINERS ANSWERED:

HOW OFTEN DO YOU TRAIN THESE PARAPROFESSIONALS IN THE FOLLOWING ACTIVITIES?

JOB DESCRIPTIONS

PARAPROFESSIONALS ANSWERED:

HOW OFTEN ARE YOU LIKELY TO DO THIS OR SOMETHING LIKE THIS ON YOUR JOB?

ACTIVITIES	Never	Once In A While	Fairly Often	Very Often
Demonstrating to students the proper way to locate and replace books on library shelves				
Training paraprofessionals in classroom management duties, such as having children put away their coats and keep their desks neat				
Assisting in the supervision of students arriving and leaving the school building				
Preparing materials for training sessions; for example, mimeographing lesson plans, setting up audio-visual materials, and laying out papers				
Sending notices to parents of students who have been late or absent a great deal				
Inviting families to school meetings and community workshops to discuss school problems				
Assisting students in locating library materials, such as books, maps, and charts				
Answering any questions the paraprofessionals may have concerning their job responsibilities; for example, performing certain tasks assigned by a member of their school staff which were not originally stated in their job specifications				
Keeping a file of local doctors, health clinics, medicare and medicaid rules, or other health information				
Listening to parents talk about problems they have with their landlords, building superintendents, or in finding new places to live				
Taking charge of students on a bus, in a cafeteria, on the playground, or in assembly				
Reporting students' learning problems to a teacher				
Correcting and grading short-answer tests (fill-ins or multiple choice)				
Assigning schoolwork to be done during class time, such as writing a book report and solving arithmetic problems				
Taking inventory of classroom books, general supplies, and audio-visual equipment in the school				
Teaching students the meaning of number places in arithmetic; for example, that 37 is three tens and seven ones				

PROJECT DIRECTORS ANSWERED:

HOW OFTEN DO YOU EXPECT THESE PARAPROFESSIONALS TO PERFORM THE FOLLOWING ACTIVITIES?

IMMEDIATE SUPERVISORS ANSWERED:

HOW OFTEN DOES THE PARAPROFESSIONAL YOU SUPERVISE PERFORM THE FOLLOWING ACTIVITIES?

TRAINERS ANSWERED:

HOW OFTEN DO YOU TRAIN THESE PARAPROFESSIONALS IN THE FOLLOWING ACTIVITIES?

JOB DESCRIPTIONS

PARAPROFESSIONALS ANSWERED:
HOW OFTEN ARE YOU LIKELY TO DO THIS OR SOMETHING LIKE THIS ON YOUR JOB?

PROJECT DIRECTORS ANSWERED:
HOW OFTEN DO YOU EXPECT THESE PARAPROFESSIONALS TO PERFORM THE FOLLOWING ACTIVITIES?

IMMEDIATE SUPERVISORS ANSWERED:
HOW OFTEN DOES THE PARAPROFESSIONAL YOU SUPERVISE PERFORM THE FOLLOWING ACTIVITIES?

TRAINERS ANSWERED:
HOW OFTEN DO YOU TRAIN THESE PARAPROFESSIONALS IN THE FOLLOWING ACTIVITIES?

ACTIVITIES	Never	Once In A While	Fairly Often	Very Often
Showing paraprofessionals how to develop and improve skills in areas such as sports and exercises, sewing, dancing and drawing				
Serving as an interpreter for the principal, guidance counselor or other member of the school staff and non-English speaking parents				
Keeping an updated list of all paraprofessionals who are enrolled in a college program				
Scheduling inexperienced paraprofessionals to observe experienced paraprofessionals at work				
Sorting and cataloguing filmstrips, slides, and other audio-visual aids				
Demonstrating to the paraprofessionals ways to make costumes stage sets, and programs for a student play or other production				
Contacting a paraprofessional's school if she is not present at training sessions				
Helping children put on and take off their hats and coats				
Taking responsibilities away from a student who is misbehaving or violating a school rule				
Sharing an experience similar to one which is bothering a student				
Meeting with a child after class time to discuss and work out a problem				
Performing clerical work in the school office, such as filing typing, and answering the phone				
Orienting new paraprofessionals to their job, such as describing job duties and introducing them to the people they will work with				
Listening to children read or give reports				
Working with your supervisor (district trainer, trainer-coordinator, etc.) on plans for future training sessions				
Identifying special talents of paraprofessionals or other community people; for example, a bilingual paraprofessional who can translate for others				

JOB DESCRIPTIONS

PARAPROFESSIONALS ANSWERED:

HOW OFTEN ARE YOU LIKELY TO DO THIS OR SOMETHING LIKE THIS ON YOUR JOB?

PROJECT DIRECTORS ANSWERED:

HOW OFTEN DO YOU EXPECT THESE PARAPROFESSIONALS TO PERFORM THE FOLLOWING ACTIVITIES?

IMMEDIATE SUPERVISORS ANSWERED:

HOW OFTEN DOES THE PARAPROFESSIONAL YOU SUPERVISE PERFORM THE FOLLOWING ACTIVITIES?

TRAINERS ANSWERED:

HOW OFTEN DO YOU TRAIN THESE PARAPROFESSIONALS IN THE FOLLOWING ACTIVITIES?

ACTIVITIES	Never	Once In A While	Fairly Often	Very Often
Talking over with a principal or teacher the problems families are having with welfare or in supporting their children				
Explaining to paraprofessionals the basics about health care, such as proper eating habits, the importance of getting enough sleep, and proper dental care				
Keeping in close contact with the district office by sending messages, making deliveries, and picking up materials				
Making contact with book distributors and publishers through written correspondence, telephone conversations, or personal contact				
Giving special care to a student with a physical handicap, such as seating a child who is hard of hearing near the front of the room				
Writing letters and thank you notes to guests and speakers who attend training sessions				
Telling families about available health clinics, vaccination programs, medical tests or other health services they can use				
Recommending special doctors or health centers to parents of students with particular medical problems				
Preparing bulletin board displays, such as posting students' work and mounting pictures				
Reading aloud to children				
Assisting students with learning drills in areas such as word recognition, pronunciation, and arithmetic tables				
Demonstrating to the paraprofessionals ways to correct and point out a child's error				
Assisting in collecting and recording money for the school bank, lunch, or special trips				
Explaining to parents the importance of keeping clinic appointments				
Suggesting books for the paraprofessionals to read				
Attending meetings to explain school programs, events, and issues so as to encourage parent involvement				

JOB DESCRIPTIONS

ACTIVITIES	Never	Once In A While	Fairly Often	Very Often
Taking care of books; for example, repairing bindings, erasing pencil marks, and taping torn pages				
Assisting in the development and distribution of training program evaluations; for example, preparing and distributing questionnaires, conducting interviews, and observing paraprofessionals at work				
Trading ideas with families about good buys in clothing, food, or housewares				
Arranging meetings between a student and his guidance counselor or teacher to discuss a problem the student has in school, such as frequent tardiness, dropping out, suspension, or a learning problem				
Arranging and supervising monthly meetings for paraprofessionals in your school				
Planning a class field trip or visit				
Planning a special event for a group from the neighborhood or school, such as a picnic at a nearby beach or state park				
Filing and sorting materials, such as records, papers, and mail				
Having available reference or teaching materials, such as books, maps, or charts that may be helpful for the paraprofessionals' training				
Distributing and collecting materials for special events in the school (exhibits, science fairs, carnivals, etc.)				
Assigning homework, such as preparing lesson plans for the paraprofessionals who participate in training sessions				
Inviting community leaders to participate in committees concerned with school programs, such as the Policy Advisory Council				
Keeping records of names, addresses, telephone numbers, and other basic information of the paraprofessionals you train				
Keeping a daily log of what takes place during each class visit to the library				
Keeping in touch with the colleges paraprofessionals are enrolled in; for example, informing the colleges when the paraprofessionals' summer vacation begins so that the summer college session can be scheduled				

PARAPROFESSIONALS ANSWERED:

HOW OFTEN ARE YOU LIKELY TO DO THIS OR SOMETHING LIKE THIS ON YOUR JOB?

PROJECT DIRECTORS ANSWERED:

HOW OFTEN DO YOU EXPECT THESE PARAPROFESSIONALS TO PERFORM THE FOLLOWING ACTIVITIES?

IMMEDIATE SUPERVISORS ANSWERED:

HOW OFTEN DOES THE PARAPROFESSIONAL YOU SUPERVISE PERFORM THE FOLLOWING ACTIVITIES?

TRAINERS ANSWERED:

HOW OFTEN DO YOU TRAIN THESE PARAPROFESSIONALS IN THE FOLLOWING ACTIVITIES?

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JOB DESCRIPTIONS

PARAPROFESSIONALS ANSWERED:

HOW OFTEN ARE YOU LIKELY TO DO THIS OR SOMETHING LIKE THIS ON YOUR JOB?

PROJECT DIRECTORS ANSWERED:

HOW OFTEN DO YOU EXPECT THESE PARAPROFESSIONALS TO PERFORM THE FOLLOWING ACTIVITIES?

IMMEDIATE SUPERVISORS ANSWERED:

HOW OFTEN DOES THE PARAPROFESSIONAL YOU SUPERVISE PERFORM THE FOLLOWING ACTIVITIES?

TRAINERS ANSWERED:

HOW OFTEN DO YOU TRAIN THESE PARAPROFESSIONALS IN THE FOLLOWING ACTIVITIES?

ACTIVITIES	Never	Once In A While	Fairly Often	Very Often
Keeping a record of where legal services can be obtained, such as those available through lawyers, the Legal Aid Society, police stations, and courts				
Listening to students talk about their classes, things they are learning, or problems they have with other students, teachers or their school work				
Accompanying students to the library, lunchroom, or another class				
Circulating information about your program to paraprofessionals in other schools and districts				
Participating with the teacher in program evaluation by filling out a report form and checking student's progress				
Assigning tasks to parents which will help them aid their children in schoolwork or personal problems, such as special word drills and making sure the child has sufficient sleep each night				
Setting up and arranging meetings for the paraprofessionals in your school, such as reserving a room, announcing a meeting and preparing materials				
Excluding a student from participating in a school or classroom activity because of misconduct				
Distributing routine notices, memos, and announcements of training meetings to the paraprofessionals in your district				
Keeping records to be sure all books and magazines are arriving promptly and regularly				
Developing administrative forms for the paraprofessional training program, such as attendance sheets and absentee forms				
Helping a parent complete a job application or set up an interview for a job				
Taking home children who are ill				
Answering and using the telephone and processing mail at training headquarters				
Preparing stencils, ditto or other duplication masters				
Helping students write sentences and parapraphs; for example teaching grammar, sentence structure, and ways to organize and express ideas				

JOB DESCRIPTIONS

PARAPROFESSIONALS ANSWERED:

HOW OFTEN ARE YOU LIKELY TO DO THIS OR SOMETHING LIKE THIS ON YOUR JOB?

ACTIVITIES	Never	Once In A While	Fairly Often	Very Often
Keeping attendance records for paraprofessionals taking part in training				
Discussing a student's problems in affording school clothes, lunch money, or school trips with his counselor or other school staff				
Processing magazines and periodicals (stamp, shelve, and apply plastic binders) when they first arrive in the library				
Showing paraprofessionals techniques and methods to use in teaching students how to pronounce and spell new words				
Checking the daily attendance and time cards of paraprofessionals and school aides				
Delivering library books to the classrooms for their own mini-libraries				
Attending conferences, lectures, and workshops to learn how to train paraprofessionals				
Arranging for and inviting guest speakers to participate in training sessions				
Displaying book jackets of recently acquired library books				
Reporting paraprofessional problems to the administration				
Reading book reviews to suggest possible new library books that would be of interest to the students				
Getting the room ready for training sessions by arranging tables and chairs, putting out materials, cleaning boards, etc.				
Giving parents information about Spanish and English high school equivalency tests				
Unpacking and processing new library books (pasting pockets, labeling with call numbers, stamping all materials, etc.)				
Checking card catalogue for duplicate cards				
Finding out if the school office can help families who have to relocate or are having trouble with their housing				
Meeting with principals, assistant principals, teachers, and paraprofessionals to discuss the paraprofessional's role and job responsibilities in the school				

PROJECT DIRECTORS ANSWERED:

HOW OFTEN DO YOU EXPECT THESE PARAPROFESSIONALS TO PERFORM THE FOLLOWING ACTIVITIES?

IMMEDIATE SUPERVISORS ANSWERED:

HOW OFTEN DOES THE PARAPROFESSIONAL YOU SUPERVISE PERFORM THE FOLLOWING ACTIVITIES?

TRAINERS ANSWERED:

HOW OFTEN DO YOU TRAIN THESE PARAPROFESSIONALS IN THE FOLLOWING ACTIVITIES?

JOB DESCRIPTIONS

ACTIVITIES	Never	Once In A While	Fairly Often	Very Often
Filling requests for library materials coming from teachers, guidance counselors, or other school staff members				
Demonstrating to paraprofessionals learning drills they can teach the children to do at home; for example, playing with flashcards, reading signs on the street, or counting the steps in stairways				
Maintaining a list of all books and materials located in the library				
Telling families about activities in your school or in other schools, such as parent-teacher workshops, tutoring, and pre-school programs				
Telling families who they can call about housing complaints or where there may be apartments to rent				
Assisting librarian in ordering books				
Informing principals when the paraprofessionals in their school will be attending training sessions				
Continuing library activities (reading a story or discussing library facilities) with groups of students for short periods of time when the librarian is called away				
Showing paraprofessionals how to use mechanical aids, such as teaching machines, cuisinaire rods, bead boards, or other science and language laboratory equipment				
Performing bilingual tasks, such as translating letters that are to be sent to non-English speaking parents and helping non-English speaking parents fill out forms				
Assisting in collecting and recording money for overdue books				
Conducting small group instruction with paraprofessionals during training sessions				
Assigning aides to escort a parent to the school for interviews with a principal, guidance counselor, teacher, etc.				
Using your knowledge of the community to help the school staff understand what parents want for their children				
Arranging and supervising training sessions for both the teacher and the paraprofessional				

PARAPROFESSIONALS ANSWERED:

HOW OFTEN ARE YOU LIKELY TO DO THIS OR SOMETHING LIKE THIS ON YOUR JOB?

PROJECT DIRECTORS ANSWERED:

HOW OFTEN DO YOU EXPECT THESE PARAPROFESSIONALS TO PERFORM THE FOLLOWING ACTIVITIES?

IMMEDIATE SUPERVISORS ANSWERED:

HOW OFTEN DOES THE PARAPROFESSIONAL YOU SUPERVISE PERFORM THE FOLLOWING ACTIVITIES?

TRAINERS ANSWERED:

HOW OFTEN DO YOU TRAIN THESE PARAPROFESSIONALS IN THE FOLLOWING ACTIVITIES?

JOB DESCRIPTIONS

PARAPROFESSIONALS ANSWERED:
HOW OFTEN ARE YOU LIKELY TO DO THIS OR SOMETHING LIKE THIS ON YOUR JOB?

PROJECT DIRECTORS ANSWERED:
HOW OFTEN DO YOU EXPECT THESE PARAPROFESSIONALS TO PERFORM THE FOLLOWING ACTIVITIES?

IMMEDIATE SUPERVISORS ANSWERED:
HOW OFTEN DOES THE PARAPROFESSIONAL YOU SUPERVISE PERFORM THE FOLLOWING ACTIVITIES?

TRAINERS ANSWERED:
HOW OFTEN DO YOU TRAIN THESE PARAPROFESSIONALS IN THE FOLLOWING ACTIVITIES?

ACTIVITIES	Never	Once In A While	Fairly Often	Very Often
Assigning students to seats or work areas in the library				
Accompanying paraprofessionals on field trips				
Finding out what the housing authority can do to relocate tenants and learning the procedures for handling housing complaints				
Preparing visual aids for training sessions, such as work cards, alphabet posters, word and picture games, time tables, flashcards, and science charts				
Distributing packages that come to the school office to the appropriate member of the school staff				
Assigning library jobs or responsibilities to students, such as shelving books, collecting overdue fines, and organizing the card file				
Keeping the principals and other school administrators informed of what the paraprofessionals are learning during their training				
Keeping a daily log of your duties				
Keeping the paraprofessionals informed of current lectures, workshops, conferences, or college opportunity programs that they might be interested in				
Helping to maintain a functional, attractive library by decorating the room and performing light housekeeping duties				
Attending parent and community meetings to keep the parents informed of what takes place in paraprofessional training programs				
Checking out books for students in the library or schoolroom				
Checking to see that the paraprofessionals and school aides are attending to their assignments				
Playing a record, tape recorder, filmstrip, or movie projector to pupils during a lesson				
Going over with the teacher class plans for the next few weeks				
Reviewing lesson plans with the librarian to determine specific library activities				

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JOB DESCRIPTIONS

ACTIVITIES	HOW OFTEN ARE YOU LIKELY TO DO THIS OR SOMETHING LIKE THIS ON YOUR JOB?			
	Never	Once In A While	Fairly Often	Very Often
WHAT OTHER JOBS DO YOU DO? Please specify:				

TABLE I

NUMBER OF PEOPLE LIVING IN THE PARAPROFESSIONAL'S HOUSEHOLD

	Number	Percent
TOTAL RESPONDENTS	146	100.0
NO RESPONSE	6	4.1
TOTAL RESPONSES	140	96.0
Number of People in Household		
1	3	2.1
2	15	10.3
3	22	15.1
4	41	28.1
5	29	19.9
6	20	13.7
7	6	4.1
8 or more	4	2.7

TABLE II

PREVIOUS JOB EXPERIENCE OF PARAPROFESSIONALS

	Number	Percent
TOTAL RESPONDENTS	146	100.0%
NO RESPONSE	45	31.0
TOTAL RESPONSES	101	69.0
Professional, Technician, and Kindred Workers	15	10.4
Farmers and Farm Managers	-	-
Managers, Officials, and Proprietors (Exc. Farm)	2	1.4
Clerical and Kindred Workers	34	23.4
Sales Workers	16	10.9
Craftsmen, Foremen, and Kindred Workers	1	0.7
Operatives and Kindred Workers	-	-
Private Household Workers	4	2.8
Service Workers (Exc. Private Household)	12	8.3
Laborers (Exc. Farm and Mine)	17	13.1

TABLE III

NUMBER OF AFFILIATIONS OF THE PARAPROFESSIONAL

	Number	Percent
TOTAL RESPONDENTS	146	100.0
NO RESPONSE	45	30.8
TOTAL RESPONSES	101	69.2
Number of Affiliations		
1	40	27.0
2	24	16.0
3 or more	37	25.0

TABLE IV

TYPE OF PARAPROFESSIONAL AFFILIATION

	Number	Percent
TOTAL RESPONDENTS	146	100.0
NO RESPONSE	45	30.8
TOTAL RESPONSES *	199	100.0
Type of Affiliation		
Community	49	33.5
Recreational/Social	10	7.9
School	83	56.8
Civic	-	-
Political Action	11	7.6
Trade Union	-	-
Religion	17	11.6
Charitable/Service	29	19.9

*Each respondent was allowed more than one response.

TABLE V

PARAPROFESSIONAL TITLE
ACCORDING TO PRESENT AND PREVIOUS TRAINING

	1970 - 1971		1969 - 1970		1968 - 1969	
	Number	Percent	Number	Percent	Number	Percent
TOTAL	146	100.0%	146	100.0%	146	100.0%
NO RESPONSE	13	8.9	57	39.0	86	58.9
TOTAL RESPONSES	133	91.0	89	60.9	60	41.1
Auxiliary Trainer	10	6.8	5	3.4	2	1.4
Educational Assistant	21	14.4	24	16.4	18	12.3
Educational Associate	2	1.4	2	1.4	1	0.7
Family Assistant	35	24.0	23	15.8	16	11.0
Family Worker	3	2.1	3	2.1	4	2.7
Parent Program Assistant	23	15.8	10	6.8	7	4.8
Teacher Aide	6	4.1	3	2.1	1	0.7
Other	33	22.6	19	13.0	11	7.5
RECEIVED TRAINING						
Yes	76	52.1	52	35.6	35	24.0
No	39	26.7	25	17.1	14	9.6
No Response	31	21.4	69	47.3	97	66.5

APPENDIX H

Data Analysis Procedures
Non-classroom Paraprofessionals

The three methods used to analyze the data collected for non-classroom paraprofessionals (See "Background Information and Job Descriptions for Paraprofessionals in the New York City Schools," Appendix G, p. A-172) are described below.

1. Frequency distributions were constructed for all questions where multiple choice answers were offered, including the 207-item checklist. The frequency distributions displayed both raw data and percentage figures, with all percentages computed according to the total number of respondents completing the questionnaire (N = 146).

Where multiple-choice answers were not made available, as in the questions dealing with previous job experience and the questions dealing with membership in community organizations, data were categorized and given special analysis. Previous jobs were classified into standard U.S. Census job categories with the categories ranked by social status, income, and education requirements. Data for membership in community organizations were first coded into a set of categories. One resulting table showed the number of memberships held by paraprofessionals; a second table showed the types of memberships held. Frequency distributions were developed for the total population of responsing paraprofessionals and for the seven job titles individually.

2. The calculation of similarity measures was a second analysis performed on the 207-item checklist. Responses to each item on the checklist were coded as "yes" if "fairly often" or "very often" were given as answers and "no" if "never" or "once in a while" were checked. Responses were identified according to the different respondents: the seven types of paraprofessionals, the supervisors, the trainers, or the project directors. Each of the six possible pairs of respondent classes was treated separately for each of the seven titles, making a total of 42 comparisons. Each of these 42 comparisons consisted of a number of pairs, and the similarity measure for the whole comparison was calculated as the average of the pair-wise similarities.

When both entries for a corresponding item on two questionnaires were "yes," this was defined as a match. The pair-wise similarity was computed as the probability of getting more than X matches, given N_1 and N_2 (the numbers of "yes" entries in each of the two questionnaires) and the total number of entries, which was 207, assuming the two sets in the pair were independent. The probability was defined as the sum of the hyper geometric distribution from $X + 1$ to $\min (N_1 , N_2)$.

For all sets of pairs in these data, the similarity measure was extremely high (over 0.98). Therefore, the data set was reduced from 207 items to 155, eliminating the least frequently checked items. The 155 items retained --75 percent of the total -- accounted for 90 percent of the responses.

3. A final analysis performed on the 207-item checklist was the identification of the most frequently matched items. This was carried out for all pairs of respondents within a given title. The number of "yes" answers and the number of matches were calculated along with the ratio of the number of matches to the number of "yes" answers. The data were tabulated in descending order (for each title) both by ratio and by number of "yes" responses.